JPRS 76225

14 August 1980

USSR Report

AGRICULTURE

No. 1247

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GRAIN HARVEST PROGRESS ON THE LOWER VOLGA, CHERNOZEM TERRITORY

[Editorial Report] Moscow SEL'SKAYA ZHIZN' in Russian 23 Jul 80 p 1 reports the harvest work front is expanding in Orenburgskaya Oblast. Equipment operators in many rayons are already cutting and thrashing grain crops. Kolkhozes and sovkhozes in the southern zone were met with great difficulties. Here during the entire month of May amost no rain fell, the grain turned out stunted. Therefore many enterprises are harvesting by direct combining. Grain [kolosovyye] crops have been cut on the first 150,000 hectares. The harvest has begun in the southern part of Kuybyshevskaya Oblast. They will harvest grain from more than 2,000,000 hectares here.

Moscow TRUD in Russian 26 Jul 80 p 1 notes in Penzenskaya Oblast the first threshings of rye, wheat and pulse crops are pleasing the agricultural workers. They will sell 1,200,000 tons of grain to the state.

Moscow SOVETSKAYA ROSSIYA in Russian 22 Jul 80 p 1 reports the harvest has started in the south of Voronezhskaya Oblast. Enterprises here will harvest over 1,600,000 hectares of early grains and pulse crops.

Moscow SOVETSKAYA ROSSIYA in Russian 22 Jul 80 p 1 notes that in Kalmykia agricultural workers in Gorodovikovskiy and Yashaltinskiy rayons have begun sales of above plan grain to the state. A good crop has grown up on the local fields. Enterprises in Kalmykia will sell 300,000 tons of grain to the state, twice the yearly plan.

Moscow PRAVDA in Russian 29 Jul 80 p 1 carries an article that reports that Kalmykia grain sales are going forth most intensively in Gorodovikovskiy and Tashaltinskiy rayons, which produce a third of the grain harvested in Kalmykia. The overall area to be harvested in Kalmykia is 453,000 hectares. a significant part of this is in Iki-Burul'skiy and Maloderbetovskiy rayons. The harvest pace here is substantially behind the plan. Enterprises having finishg harvesting on their own fields are sending equipment here. We can not get along without such a maneuver. But it should be worked out ahead to time. Due to lack of skill it has been more like putting out fires. And this inevitably leads to additional losses.

Moscow GUDOK in Russian 16 Jul 80 p 1 notes equipment operators in Saratovskaya Oblast have begun large-scale harvesting of grain. They will gather in the harvest from 4,000,000 hectares. The late sowing dates have moved the cutting of winter and spring grains close together. This has forced the equipment operators to work at an accelerated pace. They will do the harvesting in 15 to 20 work days.

Moscow SOVETSKAYA ROSSIYA in Russian 22 Jul 80 p 1 reports the harvest front has moved north into Bashkiria. Zianchurinskiy, Kushnarenkovskiy, Chekmagushevskiy and some other rayons are harvesting.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SUGAR BEET CROP NOTES FROM THE UKRAINE

[Editorial Report] Kiev SIL'S'KI VISTI in Ukrainian 25 Mar 80 p 2 notes the agricultural workers in the Ukraine will grow 312 quintals sugar beets per hectare, in order to sell 50,250,000 tons sugar beets to the State. Following the example of Yampol'skiy Rayon they will strive to get no less than 30 quintals of sugar per hectare.

Kiev SIL'S'KI VISTI in Ukrainian 30 Apr 80 p 1 has a rather long article on the Ukrainian sugar beet crop that reports the rather cool spring and excessive moisture in the soil moves the dates back for the start of sugar beet planting. This led to uneven development not only within the boundaries of one enterprise but even on one field. Now the situation on the beet fields is varied. Therefore a differentiated approach should be applied on each field or even a part thereof.

The article points out that the formation of a soil crust in some areas is not out of the question and recommends implements for dealing with this. It mentions further that the length of the vegetation period will be shorter by almost a month.

Sugarbeet growers are admonished that those areas which did not get the recommended amount of mineral fertilizer in the fall should be top dressed before 15 June.

Kiev SIL'S'KI VISTI in Ukrainian 18 July 80 p 1 indicates a mid-July review of the Ukrainian sugar beet crop situation reports that the protracted cold spring and cool summer with frequent pouring rains which are falling in most of the sugar beet growing regions of the country have the reason for the tardy (by two to four weeks) planting of the sugar beets and start of crop care.

The excess precipitation made for compacting of upper layers of the soil, especially those heavy in mechanical composition: the gray, dark gray forest and podzolic chernozem soils; and cut back the flow of air into the soil.

The drop of nitrate nitrogen into the depths of the soil has been observed on beet fields affected by the precipitation. And due to poor aeriation the nitrification process has been weakened. This along with other reasons (insufficient soil temperature) in several rayons has been accompanied by weak growth of the root mass.

The article goes on to state that due to this it is necessary to establish conditions for accelerated sugar beet growth, especially top dressing with nitrogen fertilizer. On the other hand unilateral top dressing of plants with nitrogen not too long before harvesting may lead to a sharp decrease in sugar content. In connection with this and to moderate the negative influence of nitrogen on sugar content in the roots the nitrogen top dressing of the beets must be in conjunction with potassium and phosphorous.

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USSR SUGAR BEET CROP NOTES

[Editorial Report] Krasnodar SEL'SKIYE ZORI in Russian No 5, May 80 pp 21, 24-25, 33 indicate that in Belgorodskaya Oblast a shortfall of almost 1,500,000 tons of sugar beets was incurred in 1979. In order to correct this situation sugar beet growers will grow no less than 220 quintals of sugar beets per hectare and sell no less than 3,400,000 tons of sugar beets to the State.

In Kurskaya Oblast every year almost 200,000 hectares of the better crop land is given over to sugar beets. Kurskaya Oblast will sell 4,340,000 tons of sugar beets to the State.

In Tambovskaya Oblast they will gather no less than 180 quintals of sugar beets per hectare and sell 2,250,000 tons of sugar beets to the State.

Krasnodar SEL'SKIYE ZORI in Russian No 5, May 80 p 16 and Moscow IZVESTIYA in Russian 13 July 80 p 1 report that in Voronezhskaya Oblast the sugar beet area was expanded to 250,000 hectares in 1976. Time showed that this measure was justified. The 1980 sugar beet area remains at 250,000 hectares.

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 11 Jun 80 p 2 notes Taldy-Kurganskaya Oblast will sell 1,052,000 tons of sugar beets to the State.

Frunze SEL'SKOYE KHOZYAYSTVO KIRGIZII in Russian No 4, Apr 80 p 8 reports Kirgizstan will harvest no less than 390 quintals of sugar beets per hectare, will sell 1,500,000 tons of sugar beets to the State.

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KRASNODARSKIY KRAY, ROSTOVSKAYA OBLAST HARVEST--Moscow SEL'SKAYA ZHIZN' in Russian 23 Jul 80 p 1 and Moscow TRUD in Russian 23 Jul 80 p 1 report grain growers in Krasnodarskiy Kray are finishing the harvest. Of 2 million hectares grains and pulse crops are cut on 1,900,000 hectares and threshed on an area of 1,500,000 hestares. All kolkhozes and sovkhozes are making large-scale sales of grain to the state. Yesterday the agricultural workers sent the millionth ton of grain to the state. Over 600,000 tons of strong and valuable wheat have been sent to the state. Moscow IZVESTIYA in Russian 20 Jul 80 p 1 reports that equipment operators in Rostovoskaya Oblast will gather in the harvest in 8 to 10 day, 80 percent by two phase harvesting. Time has proven the reality of this goal. Grain [kolosovyye] crops have been cut on more than 1,800,000 hectares, over 200,000 hectares a day, while windrows have been threshed on 100,000 hectares a day. All 40 rayons are already involved in harvesting grain. The flow of grain to the elevators is growing. Enterprises have already sold over 300,000 tons of grain. [Editorial Report]

CSO: 1824

UDC 637.1.002.6.005

IMPROVEMENT URGED IN SUPPLYING POPULATION WITH DAIRY PRODUCTS

Moscow MOLOCHNAYA PROMYSHLENNOST' in Russian No 5, May 80 pp 1-5

[Article by V.D. Fillipov, engineer, USSR Ministry of the Meat and Dairy Industry]

[Text] In February 1980, an All-Union conference of top officials of the dairy industry was convened, at which measures were examined for improving supply to the population of dairy products, butter, and cheese in light of resolutions of the November(1979) Plenum of the CPSU Central Committee and the address made at that Plenum by the CPSU CC Secretary General and Chairman of the Presidium of the Supreme Soviet of the USSR, comrade L.I. Brezhnev. Also taken under consideration were methods for the more efficient utilization of skim milk, buttermilk, and whey.

Participating in the work of the conference were deputy ministers of the meat and dairy industry of the union republics, executives of industrial associations and scientific research and design engineering organizations, general directors of production associations, and supervisory personnel of the CPSU CC, USSR Council of Ministers, the USSR Gosplan, RSFSR Council of Ministers, RSFSR Gosplan, the Central Committee of the trade union of food industry workers, and the USSR Ministry of Trade.

A report was delivered by S.F. Antonov, member of the CPSU CC and minister of the USSR meat and dairy industry.

The report pointed out that L.I. Brezhnev, in his address to the November (1979) Plenum of the CPSU CC, devoted a great deal of attention to problems relative to the supply of food products to the population, having indicated that the guarantee of a continual supply and production--in sufficient quantity and wide assortment--of high-quality food products comprise one of the most important objectives arising out of the efforts of the party to improve the welfare of the labor force.

The staffs of production associations and enterprises of the dairy industry, implementing measures related to the carrying out of the resolutions of the 25th CPSU Congress and subsequent Plenums of the CPSU CC, and giving broad impetus to socialist competition, have produced within the first four years of the 10th Five-Year Plan 9.4 billion rubles worth of production over and above comparable figures for 1971-74; they have surpassed planned production of butter, cheese, dry and condensed milk, and dry milk products for infant formulas. There has been an improvement in the use of dairy by-products, an increase in the quality of dairy products being manufactured, and a major replenishment of dairy product assortment.

Moreover, as a result of adverse weather conditions and consequent difficulties in the development of livestock production, production associations and enterprises experienced a shortfall in 1979 for sales to the state which totalled 5.1 million tons of milk.

With regard to the overall plan, efforts to step up purchases did not pan out. Many of the directors of ministries and industrial and production associations resigned themselves to the fact of milk expenditures for internal use on kolkhozes and sovkhozes well beyond projected amounts, and did not attempt to fulfill contractual agreements.

The dairy industry in 1979 did not live up to plans for production of a variety of products(butter, whole milk products, cheese, etc.), which has led to gaps in the supply of these items in certain regions of the country.

Heeding the points raised by L.I. Brezhnev at the November(1979) Plenum of the CPSU CC, the staff of the USSR Ministry of the Meat and Dairy Industry has adopted measures designed to prevent interruptions in the flow of milk products, butter, and cheese. The ministries of the meat and dairy industry of the union republics and Soyuzkonservmoloko[All-Union Association of Enterprises of the Milk Canning Industry and Infant Food Products] have been tasked with producing in 1980--by means of the use of dairy reserves and resources, and through an increase in milk purchases and in the efficiency of its use--an additional 80,000 tons of butter, 25,000 tons of cheese, 500,000 tons of whole milk for conversion to milk of reference fat content, and 20 million cans of skim milk.

To this end, plans have been made in cooperation with the agricultural agencies to achieve a continuous influx of milk resources into industrial processing by increasing its availability on the market through expansion of the production of ZTsM[whole milk substitutes] and their purchase by the public. It would be possible to obtain an additional amount of around 1.4 million tons by increasing purchases over the current level by an average of 75 kg for each dairy cow presently in independent use.

The operational experience of better milk producers, leading collectives, and the ministries of the meat and dairy industry of the Belorussian SSR and the Baltic republics gives ample evidence of the practicability of the assigned objective.

Work is needed in the area of milk storage by local Soviet and agricultural agencies, with a major organizational role being played by the directors of production associations and enterprises of the dairy industry. This will be aided by an All-Union competition among the staffs of enterprises, milk separator stations, milk storage depots, and dairymen with the aim of improved performance in the organization of milk supplies from the farm all the way to the public.

Socialist competition plays an important role in the organization of milk supplies in excess of planning estimates. The staffs of production associations and enterprises, upon acceptance of socialist commitments and counter-plans for 1980, must give consideration to the commitments of agricultural workers to supply milk to the state in excess of the amount called for under the plan.

As concerns the matter of increasing the commercial availability of milk and expanding the material resources need for this, the Khorol'skiy milk canning combine, an affiliate of Soyuzkonservmoloko which packages dairy products for infants(N.P. Gavrilenko, director), provides an excellent example. It has begun production of ZTsM
and is recycling them to kolkhozes and sovkhozes in place of skim milk. This has permitted farms in two rayons to increase the commercial effectiveness of their dairy operations, and has greatly economized on many man-hours and transportation and fuel costs, as well as providing for more than a half of a million rubles of additional profits and upwards of 2,500 tons of milk. Construction costs of the combine's ZTsM operation were recovered within a year and a half.

The reduction in losses of raw material during milking, transportation, and storage continues to play an important role.

It is essential that the efficient use of milk fat resources be achieved at all stages of production and that the manufacture of sour cream butter be established in all cheese-making factories.

A major factor in the conservation of material resources is improvement of the general structure of production resulting from the following steps: increased output of products having reduced fat content and enriched with protein and growth supplements, mild and sharp cheeses having aging times under five days, and processed cheeses using fillers or extenders; development of production of special cheeses to be used for processing; laying in of fruits and berries, processing of them into juices, syrups, and jams, and use of them in the making yogurt products. There should be wider use of caseinate for protein enrichment of sour cream and other products, development of the production of high-protein, high-phosphate butter, as well as various types of products made from whey protein, such as "Samson."

A large role in this is reserved for scientific organizations, inventors, and innovators.

Milk industry workers must accept greater responsibility for the unconditional fulfilment of the task assigned to them, they must obtain the cooperation of enterprises with farms and other sectors involved with the supply of agricultural commodities, thus ensuring the continuing acquisition and processing of milk, as well as the efficient organization of transportation, storage of finished product, and supply of milk products to consumers in the necessary assortment and quality.

All workers in the dairy sector should be required to read the CPSU CC and USSR Council of Ministers resolution regarding continued improvement in the dairy industry in the use of skim milk, buttermilk, and milk whey and increased production of dairy products for public consumption and as high-protein feed for livestock. The development of measures to fulfill the resolution must occupy a central position in their work.

The resolution called for raising industrial processing of skim milk and buttermilk to 25 million tons by 1985 and milk whey to 11 million tons.

In accordance with this, the following objectives were outlined:

Provide for activation of additional capacities in the production of nonfat dry milk, whole milk substitues, and dry milk whey;

Develop and implement measures during the 11th Five-Year Plan for updating technical production equipment in existing enterprises, and creating highly mechanized and automated operations for total processing of skim milk, buttermilk, and milk whey;

Improve planning for new enterprises in the dairy industry based on standardization and unification of design, space-effective and technological factors, improvement in ease-of-assembly of structures, and installation of equipment for maximum efficiency based on the use of light-weight metal structures;

Implement during 1981-1985 development and introduction of new--and continued improvement of existing--technological processes for microbiological processing of milk whey, production of milk protein concentrates and intermediate products used in bread making, pastries, ice-cream, non-alcoholic carbonated beverages, and other products which require the use of milk whey;

Expand scientific research and design operations with respect to total processing of skim milk, buttermilk, and milk whey through the use of the modern technological processes of ultrafiltration, reverse osmosis, and electrodialysis;

Organize, beginning in 1981, the production of textured protein for use in the making of sausages and meat-based convenience foods;

adopt the necessary measures for a sizeable expansion of production, broadening of the assortment, and increase in the quality of non-fat and low-fat milk products, particularly fruit and berry fillers, as well as improvement of their sensory and nutritive characteristics;

implement measures for the full use of buttermilk for the production of milk products, reducing its distribution to farms which sell milk to the state.

As regards the growth of capacities for the production of non-fat dry milk and ZTsM, the resolution called for a gradual conversion dairy industry enterprises to supplying kolkhozes, sovkhozes, and other farms engaged in the feeding of young agricultural livestock with whole milk substitutes in place of skim milk.

It was recommended that kolkhozes and sovkhozes, because of their resources and contract work limitations, implement construction of interfarm facilities for the production of whole milk substitutes to meet the needs of livestock on a cooperative basis with dairy industry enterprises.

In accordance with resolutions of the July(1978) Plenum of the CPSU CC, the organization of interfarm ZTsM facilities is already taking place based on agroindustrial integration. By the beginning of 1980, 50 such facilities had been constructed and put into operation, while about 30 more are estimated to be introduced by the end of the five-year plan. Work in this area has gone well in Belgorodskaya and Penzenskaya oblast's, where the requirements of livestock for ZTsM have for the most part been fully provided for.

The experience of leading enterprises of the Stavropol'skiy and Belgorodskiy dairy industry production associations(general directors I.P Leshchenko and K.P. Zuyev) indicates that it is possible with the aid of mass production equipment to set up the production of many types of products from milk whey after eliminating losses of this valuable raw material. Production output from whey grew in 1979 in terms of wholesale prices by comparison with 1975 by a factor of 4.7 for enterprises of the Stavropol'skiy association, and by a factor of 3 for the Belgorodskiy, while its use in industrial processing as a percentage in relation to resources increased by factors of 3 and 4.7 respectively, and totaled 53.3 percent and 94.1 percent respectively.

The benefit of such experience must find wide application. In connection with this, there is great need for a series of topical, well-prepared symposiums with participation by dairy industry specialists and scientists.

With an aim toward reaching the objective outlined with regard to the processing of skim milk, buttermilk, and whey, the Ministry of Machine Building for Light and Food Industry and Household Appliances and other machine building ministries have been assigned the task of organizing the development and implementation of mass production and supply of new types of technical equipment to associations and enterprises of the USSR Ministry of the Meat and Dairy Industry.

It will be necessary to resolve a number of organizational problems in the operative sequence in which they normally arise in order to ascertain the specific assignments and personal accountability of design engineers, capital construction and material-technical supply offices, the personnel of production associations scheduled for renovation, and newly constructed enterprises which process skim milk, buttermilk, and whey, and also in order to develop and implement a series of measures designed to prepare cadres and the like.

The need has arisen for review and improvement of the system of material incentives for the workers on whom depends the fulfilment of objectives for the use of skim milk, buttermilk, and whey. The situation calls for the organization of a system whereby young people are selected from areas surrounding construction sites for new projects and sent to technical schools and institutes of higher education. After completion of their studies in time for the initial activation of the enterprise, the young specialists would then return to work in their home areas.

We must have reinforcement of the experienced, highly qualified cadres of design institutes, NII and NPO[scientific production association] laboratories, and the departments and administrations of ministries of the meat and dairy industry of union republics and industrial and production associations involved with accomplishment of objectives in the processing of milk by-products.

Problems of quality control must have special attention. In recent years, quality of dairy products on the whole has increased; planning objectives for the grading of butter, cheeses, and other graded products have been realized. At the same time, enterprises of many production associations, as a result of violations of technological, production, and public health regulations, are allowing the release of products with deviations from the standards and technical specifications.

At the November(1979) Plenum of the CPSU CC, the issue of the necessity for continuing reinforcement of state, plan, labor, and technological discipline was forcefully addressed. It is our given task to absolutely fulfill these requirements.

The dairy industry has access to qualified cadres, possessed of a sense of the new and capable of resolving complex problems which are put before them by the Communist Party.

The final year of the five-year plan--1980--is a year of active preparation for the 26th CPSU Congress, the year of the 110th anniversary of the birth of V.I. Lenin. Workers in the dairy sector have widely participated in a socialist competition, not just for fulfilment, but for over-fulfilment, of the objectives of the national economic plan for the current year. This is making it possible to express confidence that the objectives of the 10th Five-Year Plan as regards production of dairy products will be fulfilled.

Participating in a discussion of the report were the deputy minister of the Ministry of the Meat and Dairy Industry of the RSFSR, Ye.I. Katkov, the deputy minister of the Ukrainian SSR, I.V. Boroday, the chief of control for the dairy industry from the Ministry of the Meat and Dairy Industry of the Kazakh SSR, V.N. Chalova, and the deputy chief of the department of the food industry of the USSR Gosplan, A.G. Yaitskikh.

Sharing experiences in their work to expand production, develop new types of products, and ensure the fulfilment and over-fulfilment of plans for the production of dairy products, butter, cheese, and infant formulas were the directors of: the Moscow production association, "Moloko," N.I. Antonov; the Smolyensk production association of the dairy industry, I.G. Varenik; the Poltavskiy production association, V.M. Bondarenko; the Vyruskiy combine for dairy products of the Ministry of the Meat and Dairy Industry of the Estonian SSR, Ye. O. Tayt; the Karasukskiy milk canning combine of Novosibirskaya Oblast', G.I. Kozhanov; the Kalininskiy advanced butter and cheese-making factory of the Ministry of the Meat and Dairy Industry of the Armenian SSR, S.M. Oganesyan; and the chief engineer of the Zaporozhskiy dairy industry production association, Ye.G. Kotsur, as well as others.

In reference to organizational work to increase supplies of milk to the public, expand its availability by providing kolkhozes and sovkhozes with ZTsM, expand the production of milk by-products, and develop socialist competition with respect to cooperation of dairy plants with kolkhozes and sovkhozes, the following directors of dairy industry production associations spoke: the Bel'tskiy production association--Z.F. Chebakov; Gomel'skiy----G.M. Khoborov; the Khorol'skiy milk canning combine for children's products--N.P. Gavrilenko; the Valmiyerskiy dairy combine--K.A. Shkoba; and the deputy director of the Pyl'vaskiy dairy products combine, M.M. Mekhidye, as well as others.

On operations being conducted by scientific research organizations with the aim of creating new technological processes for processing whole and skim milk, buttermilk, and whey, and for the production of dairy products based on advanced domestic and foreign methods, and with regard to measures being adopted by design organizations for the improvement of construction on dairy industry enterprises, the following gave reports: the director of VNIMI[expansion unknown], Ya.I. Kostin; the general director of the NPO, "Uglich," G.G. Shiler; the director of Gipromolprom[State Institute for Design in the Dairy Industry], B.S. Klimenko.

The speakers raised a number of important issues with regard to the improvement of production and distribution of ZTsM, the strengthening of contacts with agricultural enterprises, the gradual conversion to supplying ZTsM in place of skim milk, the improvement of hygienic conditions on dairy farms, the improvement of construction design, proper regulation of accounting practices, and so forth. Critical comments were expressed concerning the material-technical supply, the quality of equipment being installed in enterprises, the furnishing of specialized transport to the industry, etc.

Top officials approved generalized socialist commitments for the staffs of dairy industry production associations and enterprises for 1980 and adopted an appropriate resolution with recommendations aimed at improving the production of dairy products, butter, cheese, as well as surpassing planning estimates for them, and also calling for maximal industrial processing of skim milk, buttermilk, and milk whey.

Summing up the conference, the minister of the USSR meat and dairy industry, S.F. Antonov, highly evaluated the results of its work and expressed confidence that dairy industry workers would fulfill the objectives put before them.

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PRIVATE PLOTS: WHO IS ENTITLED TO ONE, WHAT SIZE

Vilnius VALSTIECIU LAIKRASTIS in Lithuanian 27 May 80 p 3

[V. Stramkauskas, chief engineer at the Administration of Land Use of the Ministry of Agriculture, counsels]

[Text] B. Petkevicius of Jonava rayon, Pasoda village, asks to have clarified:

I live on the Panoteriai kolkhoz. I also worked there as a herdsman. On December 12, 1979 I transferred to work at the Liepiai kolkhoz. Here I look after the fatling bulls. I would like to know what size personal plot I am entitled to near home?

[Answer] In cases where the kolkhoz workers live in their own homes which are outside the farm limits where they work and who have private plots smaller than those prescribed by the statutes of the kolkhoz, the size of the additional plot they are entitled to must be such, that the entire area does not exceed the prescribed size for a private plot.

Therefore, the kolkhoz administrations must decide how much land to assign you on the Panoteriai kolkhoz near your home and on the Liepiai kolkhoz, so that the combined area does not exceed the norm for a private plot.

A. Audziulis of Vilkaviskis rayon inquires:

I work for the rayon's production cooperative of the State Committee for Supply of Production Equipment for Agriculture. I live on the S. Neris kolkhoz of the same rayon. Can I receive a plot of arable land and pasture for my cow on the kolkhoz?

[Answer] The employees of the State Committee for Supply of Production Equipment for Agriculture of the Lithuanian SSR, who work and reside permanently in a rural area, are assigned private plots of up to 0.25 hectares per family.

Persons owning livestock are assigned pasture plots from the state reserves, the state forestry fund, or from other lands of non-agricultural use. When such areas are not available, pasture plots can be assigned from the lands of the kolkhoz where the workers reside. In such cases, the livestock owners will reimburse the land users the expenses for care and improvement of these plots.

One may turn, therefore, to the executive committee of the district Soviet or consult the kolkhoz administration concerning the pasture for a privately-owned cow.

A. Buteikis of Trakai rayon would like to know:

In 1972 I moved to the Balceriskiai sovkhoz and worked there for 6 years as a construction worker. On August 14, 1979 I went to work as a laborer for the Land Reclamation and Water Resources system of Trakai. What size private plot may I use at the sovkhoz where I still reside?

[Answer] The employees of the system of the Ministry of Land Reclamation and Water Resources, who work and reside permanently in a rural area, are given private plots of up to 0.25 hectares per family.

A. Kungys, chairman of the "Banga" kolkhoz of Plunge rayon inquires:

J. Gedvilas, a member of the kolkhoz since April 29, 1974, who had the use of a private plot of 0.30 hectares, was killed December 3, 1979 in a traffic accident, while walking along the road. His wife was not a member of the kolkhoz at the time of his death and is not one now. She has reached pension age but does not receive a pension. She was supported by her husband. Is the kolkhoz obliged to assign her a private plot? A. Gedviliene resides in the town of Rietavas, in a communal apartment and has a plot of land of 15 ares. Her son, born April 19, 1963, works as a laborer in the personal service shop of Plunge. No other employable or minor family members were left.

[Answer] The question in the case described, whether to let S. Gedviliene keep the personal plot on the kolkhoz, is decided by a general meeting of the kolkhoz members.

V. Mikalciene of Raseiniai rayon, Gedlaukis village, wants to know:

We lived on a private farmstead within the sovkhoz limits. My husband died in 1978. In 1979 my buildings were razed, which were evaluated in connection with land drainage work. I received a compensation in 1980. Now I live with my daughter. Her house is approximately 100 meters from my abode. Am I entitled to receive a private plot?

[Answer] If according to the data in the household register of the district Soviet you comprise a separate family, maintain a separate household, the administration may give you a private plot according to your job category.

A. Baradinskas of Zarasai rayon, Sauliai village, asks:

On my private plot there are five large trees: three oaks, one maple, and one linden tree. I would like to know if land should be allocated for these trees, which would not be considered as part of the area of the private plot?

[Answer] The land containing the home, farm structure, the yard, fruit trees, and other plants is part of the private plot.

Therefore, the land which has on it the trees mentioned, should be considered as part of the private plot area.

A. Jarasiunas of Radviliskis rayon asks:

After returning from the Soviet army, I started working at the technical school of the Seduva sovkhoz but the farm administration is not assigning me a private plot, using the justification that I live with my stepfather in the same house. I have a separate apartment. Am I entitled to a private plot? If one should be assigned, what size?

[Answer] If according to the data in the household register of the executive committee of the district Soviet you comprise a separate family, do not maintain a common household with your stepfather, then you have a right to receive a separate private plot of the size prescribed.

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CSO: 1809

AGRO-ECONOMICS AND ORGANIZATION

DEVELOPMENT OF AGRO-INDUSTRIAL COMPLEX OUTLINED

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 6, Jun 80 pp 76-81

/Article by N. Smetanin, deputy chief of a department of the USSR State Planning Committee: "The Development of the Agro-Industrial Complex of the Country"/

/Text/ The formation of the agro-industrial complex of the country reflects the objective and long-term process of the unification of agriculture and industry and the development of diverse forms of agro-industrial integration. The agro-industrial complex has passed through several stages of the establishment of intersectorial contacts, which are different in the degree of the social division of labor and development.

As a result of the implementation of the two prewar five-year plans new sectors (subsectors), which were called upon to provide agriculture with means of production, arose and were developed.

From the first two tractors, which were produced by the industry of the young Soviet state in 1923, and the 1,300 tractors in 1928 to the 51,000 in the last year of the Second Five-Year Plan--such was the rapid growth of domestic tractor building, which made it possible by the beginning of World War II to create a fleet of more than 500,000 tractors. During those years the chemical and mixed fodder industry grew. In 1940 5.2 million tons of mineral fertilizers (as against 135,000 tons in 1928) and 1.2 million tons of mixed fodders were produced.

Enterprises for the supply and service of agriculture (machine and tractor stations and supply and marketing organizations, which supplied tractors and agricultural machinery, fuel, spare parts, equipment and industrially produced materials) were developed. Thus, during those years practically everything was made, which at this time is called the first sphere of the agro-industrial complex.

Kolkhozes and sovkhozes became major producers and suppliers of commercial grain, industrial crops, milk and other types of agricultural products. In 1940 as against 1928 the state purchases of grain, raw cotton, milk, potatoes and other products of farming and animal husbandry increased two- to threefold and more.

The establishment of sectors of industry, which supplied machines, machinery, equipment and materials for the production of the products of farming and animal husbandry, the socialist reorganization of agriculture and the sharp increase of its marketability, the increase of the network of procurement, marketing and processing enterprises and organizations, as well as the extension of the production contacts of agriculture with the sectors of industry, which was caused by these changes, signified the creation of the material conditions for the unification of agriculture and industry under the specific conditions of our country.

This period should be considered the stage of the conception of the national economic agro-industrial complex. The relatively minor dependence of agriculture on other sectors, the substantial differences in the level of specialization, concentration, equipment and production technology between the enterprises of the cooperating sectors and the inadequate development of direct production relations are characteristic of its initial period. And although the sphere of the production of foodstuffs acquires more and more a multisectorial structure, during this period it is legitimate to speak only about the arithmetical population of sectors, which form the agro-industrial complex.

Under the specific historical conditions, which formed in our country, the initial stage of the formation of the national economic agro-industrial complex required several decades, which is connected, in particular, with the great harm done to the development of the productive forces in agriculture during the years of World War II, as well as the subsequent restoration of the production potential of the country. As a result the material conditions for the formation of the national economic agro-industrial complex in the early 1950's were still at the level of the first five-year plans.

The decisions of the September (1953) CPSU Central Committee Plenum were a stimulus for the further strengthening of the material base of agriculture and the other sectors cooperating with it. In three five-year plans (1951-1965), despite the shortcomings which existed during that period, a new step was taken in the increase of the productive forces in the entire sphere of the production of foodstuffs.

During those years major sectors of the processing industry and new specialized subdivisions for the technical service of agriculture, the production of mixed fodders, rural construction and so on were finally formed under the influence of scientific and technical progress and the process of the division of labor, which was accelerating. The functions of agricultural enterprises were being limited more and more to the production of agricultural raw materials, the influence of the sectors, which supplied agriclture with industrially produced means of production, on the results of the activity of kolkhozes and sovkhozes was increasing.

At the end of the 15 years in question agriculture had 1.6 million tractors, more than 500,000 grain combines and about 1 million trucks. The energy capacities of the sector increased to 237 million hp as against 62 million hp in 1950. Agriculture was transformed into the largest consumer of gasoline, diesel fuel and other types of fuels and lubricants.

The use of mineral fertilizers, the deliveries of which rose from 5.4 million tons to 27.1 million tons, as well as of mixed fodders (an increase from 1.1 million tons to 15.5 million tons) increased. The supply of agriculture with fixed production capital tripled.

In turn, the commodity production of agriculture during the period in question increased 2.3-fold. Its processing in the sectors of the food industry increased by an even greater extent.

All this was conducive to the considerable expansion of the production contacts between agricultural and industrial, as well as service enterprises. These contacts were accomplished during the period in question primarily by means of all kinds of procurement and marketing organizations, and between agriculture and sectors of the first sphere by means of suppliers, which checked the development of integration processes.

After the March (1965) CPSU Central Committee Plenum the process of agro-industrial integration intensified. The strengthening of the material and technical base of agriculture and the sectors connected with it, the adoption of industrial methods of producing the products of farming and animal husbandry, the considerable intensification of concentration and the extension of specialization necessitated the changeover from inadequately effective production contacts, which were achieved through intermediaries, to direct production contacts between enterprises. The latter represent different stages of the receipt and delivery to the consumer of one specific product or another (the production proper of agricultural products, their marketing, processing, storage, transportation, and in a number of instances delivery to the consumer).

Such contacts are an important milestone on the path of the organizational, technical and economic unity of the indicated stages of production within enterprises and associations of the agro-industrial type, the number of which began to increase rapidly. At the beginning of 1978 their number, according to the data of the USSR Central Statistical Administration, was 661, while with allowance made for poultry factories with a complete production cycle of the product, which is ready for sale in retail trade, there were about 1,400 enterprises. Moreover, during this period 124 agro-industrial production associations were in operation.

The organization and development of enterprises and associations of the agro-industrial type signify that in the production of a number of foodstuffs not only the material, but also the economic conditions have been created for the unification of agriculture and industry, while the process of forming the national economic agro-industrial complex has entered the stage of its coming into being.

The formation of the national economic agro-industrial complex is the present stage of its development. Like the first stage, it will require, in our opinion, several five-year periods or even decades, during which the gradual changeover to industrial methods of the production of various types of agricultural products, the convergence in the levels of organization, equipment and production technology at cooperating enterprises of agriculture and industry and the sharp increase of the dependence of agriculture on other sectors will take place.

The industrialization of production is the material base of the agro-industrial complex. The lag of the material base of agriculture, which formed historically, is responsible for the broad scale of the tasks on the industrialization of this sector, which starting with the second half of the 1960's have been worked on at an anticipatory rate as compared with other sectors. During the past three five-year plans the amount of capital investments in the development of agriculture will have been more than 390 billion rubles.

Land reclamation, the mechanization and chemicalization of production, in the process of the accomplishment of which the deliveries of industrially produced physical resources for agriculture and animal husbandry increased sharply, were the most important components of the strengthening of the material base of agriculture.

The sum of the material expenditures of industry on the production of agricultural products, as well as the increase of their proportion in the total material expenditures are a general expression of the aggregate of the flows of materials along the line "industry-agriculture." Whereas in 1965 for the production of the products of farming and animal husbandry they were in the public sector 6.7 billion rubles, in 1977 (in comparable prices) they were 26.4 billion rubles, that is, they had increased fourfold. During those years the amount of the amortization deductions as a reflection of the supply of agriculture with fixed production capital increased from 4.1 billion rubles to 10.8 billion rubles.

On the whole the proportion of nonagricultural products in the total material expenditures in agriculture (including amortization) increased during those years from 52 to 61 percent.

The increase of the flow of materials from agriculture to industry was also significant. Suffice it to say that in 1977 as compared with 1965 the volume of state purchases of the products of agriculture and animal husbandry increased 172 percent.

The noted changes signify an increase of the dependence of agriculture on other sectors, the intensification of the intersectorial production relations, which predetermine the organization of new enterprises and production associations of the agro-industrial type, as well as the transformation of the numerous, but uncoordinated production contacts of kolkhozes and sovkhozes with their partners from industry into a system of intracomplex intersectorial contacts.

the increase of the number of production formations of the new type, the extension and intensification of intersectorial contacts are two aspects of the unified process of the formation of the national economic agro-industrial complex. They are closely interconnected and interdependent. Thus, the replacement of "random" or mediated contacts of agricultural and industrial processing enterprises with long-term contracts prepares initially the economic, and with a certain level of development of the material base also the economic unity of the cooperating enterprises.

As more and more integrated enterprises (production associations) form, the conditions are created for their organizational, economic and technological unification within larger formations on the level of regions and subsectors of agriculture and industry, which are connected with the performance of the entire cycle of operations on the production of a specific final product of agriculture, and for the appearance of qualitatively new sectors (subsectors) of the agro-industrial type.

The main distinctive feature of such sectors (subsectors) is the output by them not of some intermediate product or raw material, but a product ready for consumption, which passes through all the stages of its production within a single enterprise, production association or combined sectorial association.

The appearance of sectorial associations of the agro-industrial type is a new step on the path of the formation of the agro-industrial complex of the country.

This path can be traced, for example, in viticulture, where already today in a number of union republics, which are engaged in the growing of grapes, viticulture and viniculture have been organized into a separate agro-industrial sector, which is managed independently by republic management organs. In our opinion, the conditions are ripe here for the organization on a national scale of a sectorial agro-industrial association with the inclusion in it along with production enterprises also of scientific research organizations.

A similar situation is observed in poultry raising, essential oil production, fur farming and several other sectors of agriculture.

The industrialization of agriculture, the intensifying specialization and concentration of production, the development and expansion of the direct contacts between agricultural and industrial processing and service enterprises will result in the need for the organization of enterprises and associations of the agro-industrial type also in the sectors which produce the main types of agricultural products. Increasing quantitatively, they are causing qualitative changes in the system of production relations within the agro-industrial complex.

The system of management, planning and material and technical supply are changing, being tailored to the new organizational and economic forms. Based on the unity of the goals, the new economic interrelations are being established both within the agro-industrial subdivisions and between them. The socio-economic, cultural and general reorganization of the countryside is taking place. Such an interaction of the sectors of the national economy, which are involved in the production of food products and consumer goods made from agricultural raw materials, in which they lose independent meaning, is gradually being achieved. This process signifies that the convergence and unification of industry and agriculture, about which the classics of Marxism-Leninism spoke, are entering their final stage. It could be called the stage of the formation of the developed national economic agro-industrial complex under the conditions of socialism, the most important feature of which can be traced in the example of individual sectors, in which production has been organized on an industrial basis.

How does industrial poultry raising, for example, differ from other sectors of agriculture?

From an organizational standpoint the difference consists first of all in the high degree of the division of labor. A large share of the production of eggs and poultry meat in the system of USSR Ptitseprom has now already been organized according to the principles of operation-by-operation specialization, in which the receipt of commodity production is ensured by many narrowly specialized enterprises which cooperate on the basis of the extensive development of production contacts. The result of this is the predominance in the sector of integrated production, which ensures the making of the product ready for sale.

From the economic standpoint the complete dependence of agricultural production on the other sectors cooperating with it is the main distinctive feature of industrial poultry raising. It takes the form of the absolute predominance of the proportion of past, embodied labor of the workers of the mixed fodder, machine building, power and other sectors of industry in the total labor inputs.

The proportion of the material expenditures of industry in poultry raising of the system of USSR Ptitseprom is approaching 100 percent as against 61 percent for agriculture as a whole.

Consequently, production autonomy, which is typical of agriculture even at its present stage, is practically impossible in poultry raising. This is one of the most important manifestations of the fundamental connection of agricultural and industrial production, which will be characteristic of the formation of the developed agro-industrial complex of the country.

Technically the high level of the complete mechanization and automation of production, which ensures the transformation of the labor of the agricultural workers employed here into a modification of industrial labor, distinguishes industrial poultry raising. The living and working conditions of the workers at poultry factories are similar to the conditions of industrial enterprises of the city.

Experience shows that the peculiarities of industrial poultry raising are also characteristic of other enterprises of the industrial type for the production of agricultural products--major livestock complexes, hothouse combines and so on. These peculiarities characterize a future stage of the development of the agro-industrial complex.

At present the problems of the present stage of the development of the agro-industrial complex and first of all its structure and the most important conditions of its functioning are of the greatest interest.

As experience shows, the sectorial planning being carried out does not always ensure the balance of all the sectors of the complex, which leads to the loss of a part of the produced agricultural products at one stage or another of their passage to the consumer. For example, the shortcomings, which arose in connection with the expansion of the production of fruit and vegetable products and the inadequacy of the production capacities for their processing, storage and transportation and others, are well known.

Hence ensues the need for the gradual changeover, first of all on the national economic level, from the drafting of plans for the individual sectors, which are grouped around agriculture, to the unified planning of interrelated sectors, the growth of which is completely or to some extent (for example, the chemical industry in the area of the production of mineral fertilizers) subordinate to the task of increasing food resources and raw materials for industry.

In other words, it is a matter of singling out the national economic agro-industrial complex as an object of planning for the purpose of the more effective regulation of its most important proportions, the assurance of the necessary balance and completeness. We also examine below the sectorial composition of the complex from this standpoint.

The sectorial composition of the first sphere of the agro-industrial complex is determined by its function. It is the resource sphere of the complex, which ensures the industrialization of agriculture and technical progress in the processing industry.

The resource sectors of the agro-industrial complex create the technical, technological and manpower conditions for the smoothness, continuity and mass nature of the production of agricultural raw materials and the final product of the complex. In industrializing agriculture, they make those qualitative transformations in the productive forces, which in the end dictate the need for the improvement of the entire set of production relations and become one of the most important factors of the unification of industry and agriculture. Hence the participation of one sector or another in the reproduction process in agriculture and the processing industry, as well as the degree of this participation become the most important feature which determines the composition of the first sphere of the agro-industrial complex.

First of all those sectors (subsectors) of industry and the national economy, which specialize in the production, delivery and operational maintenance of the means of agricultural production and the products of which for the most part are consumed by agriculture, conform to this feature. Among them are tractor and agricultural machine building, the microbiological and mixed fodder industry, the chemical industry in the area of the production of mineral fertilizers and means of the chemical protection of plants, the repair of tractors and agricultural machinery, material and technical supply which is performed by enterprises and organizations of the State Committee for the Supply of Production Equipment for Agriculture, reclamation and agricultural construction.

It is legitimate to include in the first sphere machine building for light and food industry, which supplies the bulk of the means of production for processing enterprises.

It is impossible to provide normal conditions of the technological process within the agro-industrial complex without a trained work force of specialists and workers. Therefore the entire complex of the social infrastructure, which includes housing, municipal service facilities and cultural and personal institutions in the countryside, as well as the construction and maintenance of intrafarm roads should be included in the first sphere.

The central link of the agro-industrial complex is agriculture proper, which constitutes its second sphere. This is connected with the fact that farming and animal husbandry in the foreseeable future will also become a main primary source of the blessings of a person in life. A large share of the products of agriculture cannot be either reproduced in other sectors or replaced by other types of products.

The process of producing most types of final products is concluded in the sectors of the third sphere. The sectors (subsectors), which ensure the processing (industrial modification) of agricultural raw materials, their procurement and storage, as well as specialized transport should be assigned to it.

Here the final product is regarded as ready for sale to the population.

This composition of the complex provides the main conditions of the reproduction of food products and consumer goods and can be a separate sphere of the economy for the purpose of ensuring the balanced, comprehensive development of interrelated sectors, the planned regulation of the entire reproduction process in the interests of the maximum yield of the final product with the minimum expenditures.

The present stage of agro-industrial integration and the formation of the agro-industrial complex requires the drafting of a unified plan of its development, in which the plans of the production of the most important types of final products would be separate comprehensive subprograms.

the method of compiling such a plan is still the subject of investigations of science and practice. It is necessary, in particular, to determine the indicators, which reflect the end result of the functioning of the agro-industrial complex and the internal structure of the complex, as well as the methods of optimizing this structure. Moreover, economically sound proportions of the development of the sectors of the complex, which ensure not only an increase of the production of food products, but also a decrease of the specific capital investments, the expenditures of labor and assets and the reduction of losses at all stages: the production, processing, storage and delivery of products to the consumer, should be established.

Much time and effort of scholars and the workers of planning organs will be required in order to study these and other questions.

At present we can only name several main methods principles of the development of the comprehensive planning of the agro-industrial complex.

The plan of the development of the agro-industrial complex of the country must be drafted not instead of, but in addition to its sectorial and territorial aspects. It cannot be compiled by the simple addition of the sectorial plans, even with their balanced coordination, since it will not be able to reflect all the diversity and complexity of the intersectorial ties, eliminate the bottlenecks at the meeting points of the sectors and thereby provide for possible versions of the development of the sectors for the achievement of the set goals on the scale of the entire complex.

Therefore, the elaboration of the goals and the most general proportions of the development of the complex, as well as the most important intersectorial problems should precede the formulation of the sectorial plans and should thereby govern the distribution of material resources among the sectors of the complex.

The balance sheets, the system of which can be determined only in the course of planning of the agro-industrial complex, should become the main means of ensuring the interconnection and proportionality of the development of the sectors of the agro-industrial complex. Here the physical and cost indicators of the sectorial plans will be used extensively, although the indicators, which characterize the volumes of production and of the final product, the effectiveness of the operation of the complex and its internal structure, will unquestionably be the main ones.

Comprehensive programs of the development of the production of one final product or another should occupy an important place in the system of planning of the agro-industrial complex. The planned solutions of the most important problems of an intersectorial nature within the complex can be provided on their basis. Among them it would be possible to single out the following: the elimination of the imbalance of the capacities for the production, processing and storage of fruit and vegetable products and potatoes; the increase of the degree of processing of agricultural raw materials and the more complete use of secondary products; the improvement of the state of preservation of products at all the stages of the reproduction process and so on.

One of the main conditions of the changeover to the drafting of a unified plan within the agro-industrial complex is the further development and improvement of sectorial planning. Thus, the comprehensive plans of the development of agriculture, which are being formulated, are such only with respect to the sector as a whole. As to its individual subsectors--plant growing and animal husbandry--here the coordination of the different aspects of the production process is still inadequate. The coordination of the plan indicators within each sector is a necessary condition of the changeover to planning of the entire agro-industrial complex.

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CSO: 1824

AGRO-ECONOMICS AND ORGANIZATION

ESTABLISHING SUBSIDIARY ENTERPRISES IN BASHKIR ASSR

Moscow TRUD in Russian 12 Jun 80 p 2

[Article by M. Mullagalyamov, deputy chairman of the Soviet Ministers of Bashkirskaya ASSR, entitled; "How to Build an Agrosection"]

[Text] Many industrial concerns in Bashkirskaya ASSR have their own subsidiary enterprises. Their role in providing food for the workers of the republic is great. Thus, in 10 years food production on the sovkhozes of the association "Bashneft'"(Bashkir Oil) has more than doubled, and without expanding the land used. The sovkhozes in the association supply the public catering concerns--which serve thousands of oil workers in the republic--with all the potatoes and vegetables they need, and with 85 percent of the eggs. The meat and milk supplied by the sovkhozes comprise 34-37 percent of the allotted state resources. Fresh vegetables, grown in sovkhoz greenhouses, are available all year in the oil workers' dining halls and at their hot food distribution points.

The oil workers in Bashkirskaya ASSR have long and diligently tended their own agricultural facilities. Seven of their sovkhozes, three fish-breeding facilities and a number of small subsidiary enterprises operate in the republic. In the last 14 years the association has invested more than R47 million in developing these subsectors. Numerous structures for livestock, greenhouses, irrigation systems, workshops, storehouses, housing areas and social facilities have been erected. The farms are equipped with modern technology. Year after year the level of farming and livestock breeding rises. The fertility of the land is maintained with care. In the last six years alone about R10 million--or an average of R420 per hectare--has been spent to combat erosion and for fertilizer, irrigation and basic soil improvement.

Certain successes in the development of agricultural production have been achieved at concerns of the ferrous and non-ferrous metal industries, machine building, and certain other branches of industry, although they still fail to use many of their production reserves. In the next few years it is planned to build new subsidiary enterprises at many concerns and to develop the existing ones.

We should recognize, though, that our republic is far from making full use of its potential for encouraging the development and qualitative growth of subsidiary enterprises. Still prevalent among certain of the economic managers and workers in the trade unions and other organizations is the traditional conception of them as second-class, unproductive facilities not worthy of particular attention. Departmental impediments are still with us, too.

Take the "Bashkirugol'" (Bashkir Coal) association, for example. At one time the Ministry for the Coal Industry of the USSR allotted it considerable resources to build a subsidiary enterprise specializing in pork production. Two prototype, thousand-head feeding stables were built, as well as a mechanized feed section, other production spaces and housing. But the association's directors did nothing to establish a feed base. The only "operational" pigsty--where 460 head of pigs are being fattened--is wet and dirty, and the complex is not fully staffed with workers.

In analyzing the state of the subsidiary enterprises run by the workers supply departments we see that they developed worse than those which are sections of concerns. Thus, until recently the sovkhozes in the Bashkir Trans-Urals which belong to the workers' supply departments of the Bashkir Cooper-Sulfur Association and the Uchalinskiy Mining and Enriching Plant were developing poorly. Two years ago the Ministry for Non-Ferrous Metals of the USSR transferred these enterprises to the plants, conferring on them the rights of sections, and the situation there began to change for the better. With assistance from the concerns' trade union committees the material-technical base of the farms is being strengthened, food production is increasing, and their financial situation is being straightened out. Steps have been taken to create normal housing conditions for sovkhoz workers.

So we can consider as irrefutable the point that a subsidiary enterprise should be one of the main sections of the concern; its indicators absolutely must be considered in determining the results of the collective's activity, as must its needs when planning expenditures to develop production. It would be advisable, in this connection, to make appropriate amendments to the legal documents which define the structure and operation of a socialist concern.

Land is required for the establishment of new subsidiary enterprises and the development of existing ones. Naturally, there is no unoccupied land in the habitable industrial rayons of Bashkirskaya ASSR. But there is much in both the mountainous, forested regions and the northeast section of the republic, particularly under control of the State Forest Trust. According to specialists many subsidiary enterprises could be located there without damaging the environment. This would, of course, require a detailed study taking many factors into account, but reality will force us to utilize this major reserve. The compilation of a general plan for using land resources in the areas mentioned has already been started; agricultural sections from concerns in Sterlitamak, Salavat, Ishimbay, Meleuz, Ufa and other cities are to be located there.

Nor has the potential of the subsidiary enterprises' assigned land holdings been exhausted, although certain of their directors are not above formulating all estimates based exclusively on expansion of their holdings by taking land from neighboring kolkhozes and sovkhozes. Thus, the concerns in Meleuz require 4000 hectares for their subsidiary enterprises, and the "Oktyabr'-skiye" concerns--2700. Understandably, it is not possible to satisfy such demands. These farms have to seek their own reserves through melioration, recultivation of "extra" territory, taking advantage of State Forest Trust tracts where forests cannot be restored, and the main thing--by beginning to exploit the mountainous, forested rayons properly.

In certain rayons the following attitude is still common: Since the subsidiary enterprise "isn't reflected in the summary"--that is to say, its production is not included in the rayon's output figures--it is no concern of mine, so let it exist on its own. As a result the local branch of the Agricultural Equipment Association only provides the subsidiary enterprise equipment and spare parts from its store of leftovers, and the Agricultural Chemical Association supplies it with fertilizer and pesticides based on the same principle. Even specialists from the rayon agricultural directorate fail to find time for these concerns. Evidently the time has come for us to regulate the relations between the subsidiary enterprises of industrial concerns and the rayon's agricultural organs.

Departmentalism complicates the situation and often makes it impossible for small concerns to develop agricultural sections because separately, each lacks adequate resources to establish a well-equipped, profitable farm. Such collectives either elect not to set them up at all or content themselves with the existence of undersized, unprofitable farms with a primitive base and half vast operation.

The way out of this bind is seen to lie in the establishment of large-scale farms that function on a cooperative basis. The experience of the Sterlitamakskiy party gorkom and of the city soviet's executive committee is instructive in this regard; Those bodies have developed a plan for seeing that the city's concerns and organizations increase meat production in the period of 1979-1985 and have issued assignments to that end. In order to create the necessary material-technical base measures were confirmed which specify the size of the facilities, who will finance them, who will prepare the documentation, and when construction will be completed. For example, by 1984 the production associations "Kaustik", "Soda", the "Krasnyy proletariy" plant, the "Sterlitamakstroy" (Sterlitamak Building) Trust and others must jointly build and put into operation a 12-thousand-head interconcern pig fattening complex on land belonging to the Michurin sovkhoz.

The directors of the concerns are cooperatively seeking capital investment and limits on the construction contract. A statute on the interconcern pig fattening complex has been worked out. A city staff--in which the trade unions actively participate--has been established to control and render practical assistance in the implementation of the measures developed.

It seems to us that the executive committees of other city Soviets of People's Deputies should work in about this same way too. The obkoms of the branch trade unions and trade union councils can also play a large role in this affair. However, some kind of interdepartmental organ is essential for resolving issues connected with the organization and operation of these cooperatively organized farms. It must have both management and control functions. Issues relating to the training of personnel should also be resolved centrally.

Crucial tasks confront the agricultural sections of the concerns. These sections have both a great future and many problems, ones which must be resolved quickly and sweepingly.

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CSO: 1824

AGRO-ECONOMICS AND ORGANIZATION

PRODUCTION OF GOODS FOR LIGHT FARMING IMPLEMENTS

Moscow EKONOMICHESKAYA GAZETA in Russian No 13, Mar 80 p 17

[Interview with head of Roskhozkooptorg M. Goremykin: "For Light Farming"]

> [Text] During the two and a half years that have elapsed following the adoption of the decree of the CPSU Central Committee and the USSR Council of Ministers entitled "Private Subsidiary Farms of Kolkhoz Members, Manual and Office Workers, Other Citizens and Collective Horticulture and Gardening," a great deal has been accomplished in connection with increasing the production and sale of the required goods. And how is Roskhozkooptorg participating in this work? A correspondent of this weekly addressed this question to the head of Roskhozkooptorg, M. Goremykin.

[Answer] Our chief task consists of ensuring that each rural resident and also the millions of amateur horticulturists are supplied with all of the required goods. This means that increases must be promoted in the production of vegetables, fruit, berries and other food products on the private farms.

The cooperation specialists are striving to create a far-flung network of stores for the selling of diverse types of implements (from shovels to electric milking units and plows), fertilizers, toxic chemicals, materials for the repair and construction of dwellings and for auxiliary buildings. Today these goods are being sold at almost 12,000 specialized "household goods" stores, at 58,000 stores which sell "goods that are in daily demand and at more than 500 warehouse-stores. More than 100 "modern housekeeping," "House - orchard - garden" and other stores have been re-equipped or opened. Departments for the sale of goods, including displays for such complexes as "Everything for the Orchard and Garden," "For a Household Expert" and others, have been expanded or newly organized in the household goods stores.

Last year alone, on the territory of horticultural associations, consumer cooperation for the RSFSR opened up more than 1,000 booths and stalls and in those areas where such facilities are not available, deliveries of fertilizer, chemicals and household implements are being organized in response to orders submitted by horticultural and gardening collectives. More than 2,500 fairs and 10-day periods and weeks dedicated to the sale of agricultural implements were held in the rayon centers and large population centers. The trade in mineral fertilizers and toxic chemicals is being expanded. For example, during the past spring and summer period in Smolenskaya Oblast alone, the sale of such products, taking into account the sale of other goods for the tending of plants and for cultivating the soil, increased by 35 percent compared to the previous year.

[Question] Did you not have a special reason for citing Smolenskaya Oblast as an example?

[Answer] Yes. The oblpotrebsoyuz [oblast union of consumers' societies] here is performing in a fine manner. For the purpose of regular trade the potrebsoyuz [union of consumers' societies] concentrated such goods at warehouses of bases valued at more than 400,000 rubles. A demonstration was organized for more than 150 types of products for orchards and gardens. A number of household goods stores in the rural areas were re-equipped into "house - orchard - garden" complexes, 18 household goods stores are carrying out the preliminary acceptance of orders for implements, mineral fertilizers and toxic chemicals and thereafter they are delivering them directly to the customers in the collective orchards and gardens.

Fine work is being performed by the cooperation specialists in Krasnodarskiy Kray, where a month's campaign dedicated to selling orchard and garden implements, mineral fertilizers and toxic chemicals to the population was carried out. During this campaign the trade in these goods increased by more than 20 percent compared to this same period last year.

A study was carried out simultaneously on consumer demand. The Krasnodarskiy Kray potrebsoyuz, in a systematic manner and at a fine tempo, is developing a network of specialized stores, including a complex display of the proposed goods. The cooperative organizations in Stavropol'skiy Kray are carrying out their work in an active manner. This also holds true for Voronezhskaya, Tambovskaya and other oblasts. Many examples of such successful work can be cited.

[Question] Upon acquainting myself with the results of household goods fairs and surveys of light agricultural implements, my attention was drawn to the entry: "Does not conform to the state standard." Was this a frequent occurrence?

[Answer] There were many such instances. The industrial enterprises, no doubt based upon the very best inducements, undertake to produce goods with no thought being given to how well they will serve the people or to what extent they meet the requirements. At the present time, hundreds of ministries and departments are producing goods for horticulturists and gardeners, but many of these enterprises, including the leading Minsel'khozmash [USSR Ministry of Tractor and Agricultural Machine-Building], are doing this at an inadequate level.

The customers complain quite properly that the shovels, hoes and choppers are heavy and that the wooden handles for them are not suitable. The cutting parts of the orchard instruments are of low quality. The sprayers and root crop cutters are unsuitable and unproductive.

Today we have a need for 3-4 million varnished or painted handles of improved quality, but the RSFSR Ministry of the Lumber Economy is, for all practical purposes, not making them available. As a rule, the ergonomic characteristics of the products are very low.

Many problems exist in connection with the supplying of mineral fertilizers and toxic chemicals. For a period of 3 years, we tried to have Minkhimprom [Ministry of the Chemical Industry] ensure that its plants would ship their fertilizers, following a preliminary classification, on the basis of 3-4 types in a freight car. However, just as in the past, only one type of fertilizer or chemical is being carried in each of the 60 ton freight cars. By way of an example, raypotrebsoyuz requires 12 types and thus 12 freight cars the overall weight of which is 720 tons are ordered. The cooperation specialists also complain regarding the packaging of the goods; poor packaging of the products detracts from the marketable appearance of the goods and makes the trade in such goods more difficult.

In discussing these shortcomings, we must not forget that in recent years our industry has accomplished a great deal towards satisfying the requirements of rural customers. The assortment of goods has been expanded considerably and the production volumes for many items are growing.

[Question] In addition to those already mentioned, do not the cooperation specialists have their own internal problems?

[Answer] They do beyond any doubt. In reproaching the suppliers, we must at the same time recognize that we have a number of unresolved problems in our own economy. The number of "orchard - garden" sections and departments at household goods stores already in existence in the rural areas is being expanded in a very weak manner. Yes and the area allotted to many trade enterprises does not permit such expansion. Quite often the leaders of individual trade organizations, in the interest of fulfilling their plans for the turnover of merchandise, display a preference for forcing the sale of expensive goods -- refrigerators, suites of furniture, crystal glass and so forth. Moreover, they do this to the detriment of expanding their trade in cheaper but nonetheless necessary light agricultural implements. We are combating such tendencies in a decisive manner.

Some of our leaders of enterprises and consumer cooperation organizations still maintain a passive attitude towards the study of consumer demand.

Thus we are assigning the task -- a broad assortment of horticultural and gardening products must be concentrated in the stores prior to the start of the season, a visual display of these products must be organized, consultations must be provided for the customers and orders addepted. In this manner the prerequisites for determining true demand will be created and optimum orders will be presented to industry for the specific products.

As yet, not all of the potrebsoyuzy [union of consumers' societies or raypos [rayon consumers' society] are making adequate use of the existing points for accepting agricultural products from the population, for the purpose of organizing at these points the sale of light orchard and gardening implements and for accepting preliminary orders for these implements. This is an effective form of work, as convincingly proven by the cooperation specialists in Penzenskaya Oblast.

In short, reserves are available. During the November (1979) Plenum of the CPSU Central Committee, Comrade L.I. Brezhnev discussed these reserves, the need for expanding the use of local resources in the production of goods and also the more active participation of cooperation specialists in this work. Our immediate obligation is that of responding to this appeal in the form of action.

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AGRO-ECONOMICS AND ORGANIZATION

ADVANTAGES, DIFFICULTIES OF PRIVATE PLOT USAGE IN DROGICHINSKIY RAYON

Minsk SEL'SKAYA GAZETA in Russian 18 May 80 p 2

[Article by A. Tseluyko: "From a Counter Or a Garden?]

> [Text] In the 1 March issue of SEL'SKAYA GAZETA for this year, an article entitled "A Forgotten Tradition" was published. In this article, the author raised the problem of private plot management. By way of continuing this discussion, we herewith offer an article on the material advantages and difficulties associated with the use of private plots in Drogichinskiy Rayon.

The house of Grigoriy Nikiforovich Kvachuk, a brigade leader for a complex brigade at the Drogichinskiy Sovkhoz, is located on one of the central streets in the village of Perkovichi. It appears that he grew up here and became familiar with the broad fields that intertwine between the meadows, the land reclamation canals and the smoke-colored coppices. And because he admired distant points, he failed to take note of the apple orchard, the well tended garden and the high quality farm buildings which surrounded him.

Grigoriy Nikiforovich is a hospitable individual. A guest in his home -- be it a neighbor who drops in to discuss life in general, his brother, a familiar brigade leader or a relative -- is cordially invited to stay for dinner by the host. The hospitality he offers is of the homespun variety. Before long, appetizing fried eggs and pickles make an appearance and during the spring period, to the surprise of all, succulent and crunchy sauerkraut prepared according to a special recipe and also tasty apples are offered. After dining, the guest invariably praises the simple and yet tasty food and thereafter inquires:

"Nikiforovich, how is it that you have time for a garden?"

True, the work of the brigade requires a great amount of time During the harvest season, he is on his feet with the first roosters, he works from morning until late in the evening and almost never has time to sit down. Kvachuk has been carrying out this demanding work for almost a quarter of a century. Earlier, when improvements were being carried out in a weak kolkhoz in the village of Popina, there were many concerns. But today there are even more concerns, despite the fact that he is working at a leading sovkhoz and his brigade is considered to be the best in the rayon. But then, just as now, the brigade leader spent all of his brief periods of leisure working on his onion bed and garden, including his potatoes. Certainly, he did not do this out of poverty. For Kvachuk, there was another moral side with regard to this work: he was convinced that it was wrong for a rural individual to have unused land around his house or to purchase vegetables in a store.

Moreover, Kvachuk was not the only one who thought this way. There are 1,060 yards at the Rodina Kolkhoz and each family has a garden. The majority of the kolkhoz members use their private plots, which are 0.35 hectares in size. This is the maximum norm as stipulated in the regulations for the kolkhoz. Some pensioners, for example, make do with a smaller area -- in keeping with their abilities and requirements. The kolkhoz furnishes assistance to all of them. Those desiring to sell a portion of their crop on the market or in consumer cooperation are provided with transport vehicles.

Generally speaking, the kolkhoz members appreciate the concern displayed in this regard by the kolkhoz administration. For many years now, the area occupied by private gardens has been comparatively stable. In any case, no trend towards reducing this area has yet been observed.

Nor should the Drogichinskiy Sovkhoz and the Rodina Kolkhoz be considered as exceptions with regard to constant assistance being furnished to the owners of private plots. For example, let us take the Novyy Put' Kolkhoz. Here the administration also displays concern for ensuring that the private gardens are cultivated properly.

There are many privately owned animals at the Kolkhoz imeni Kirov and thus quite often potatoes are grown together with grain crops on the private plots. The kolkhoz provides a combine for harvesting the forage. Is not the harvesting of the "secondary grain" affected by such merging of crops and will there be enough of it to satisfy the requirements of the owners of the plots for this product? Based upon the fact that none of the Kirov workers are purchasing potatoes on the side, it would appear that ample quantities of potatoes are being made available. Moreover, according to incomplete data alone, the kolkhoz members sold 27 tons of tubers to consumer cooperatives last year.

Certainly, such concern is not being displayed on all of the farms for the needs of the kolkhoz members and sovkhoz workers. However, generally speaking no serious complaints have been lodged. However, some gardeners have complained that they are not always able to work their plot when they wish to -- they must await their turn. Here a great deal is dependent upon personal relationships with the tractor operator. It is fine if the latter is a decent individual and not the type to be tempted by a bribe offered by [illegible] It sometimes happens that a weak tractor operator [illegible]. This is not the time to hurry to the authorities in order to complain -- time is at a premium -- but rather one should purchase a bottle at a store. If this is not done, his plot will be sown last.

"Why is it necessary to rely only upon a tractor?" inquired a veteran of the Kolkhoz imeni XX S"yezda CPSU Ivan Fedorovich Nikanchuk, during a discussion on this subject, "Would it not be simpler to provide a horse for several yards? In addition, the farm bears a great expense when the machines carry out empty runs from one plot to another."

Reserves are available not only in the rural areas but also in the city for increasing the yields of potatoes, cabbage, cucumbers and other vegetables. For example, let us take Drogichin. Even several years ago it was a rare city-dweller who did not have a garden. Even small empty lots were used for garden beds and in the northern outskirts, near the raysel'khozkhimiya, entire tracts were occupied by potatoes -- both early ripening and late varieties. Today these empty lots are covered by buildings and garages and the gardens have been moved to other outskirts of the city. But, although unused land still can be found in the vicinity of the city just as in the past, a decrease has taken place in the number of amateur gardeners. The fact of the matter is that no equipment is available for transporting the fertilizer or carrying out the plowing work. The horses are no longer available and not everyone is willing to dig up a garden using a shovel.

It would appear to be a simple matter to obtain assistance from the combine for providing domestic services for the population. But the cultivation of gardens is not included among the more than 150 types of services provided here.

"It is not our type of work" stated the chief engineer of the combine, Vasiliy Ivanovich Polkhovskiy, "Perhaps the combine for municipal enterprises handles gardens."

"We have already been there" replied the director of this combine, Arkadiy Andreyevich Kalinka, "water line, sewerage, planting of shrubs and trees along the streets, parks, floriculture -- this is the type of work we carry out, but no private gardens."

Within the rayon there is not one organization that accepts orders from citizens for cultivating gardens, despite the fact that in the Baltic republics and in certain rayons in Belorussia this work is performed by the combines for furnishing domestic services for the population.

"Horses must be acquired and a stable is needed" interjected Vasiliy Ivanovich.

This was in all probability a frivolous statement. But why is it not possible to procure a small tractor. It is believed that if the domestic services workers would display concern for the municipal gardens, the lines in the vegetable stores would become shorter.

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TILLING AND CROPPING TECHNOLOGY

OFFICIAL DECREE ON KAZAKHSTAN RICE CROP

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 27 May 80 p 3

[Unattributed article: "Develop Rice Growing"]

[Text] A foundation has been established for further development of rice growing as a result of accomplishment of a broad program of land reclamation in the republic. Rice production has increased by a factor of 5.5 as compared to 1965.

Along with this, in recent years the rates of rice-growing development have slowed, productivity is not increasing, and tasks to have irrigated lands ready for use are not being accomplished. Efforts to rebuild extant rice irrigation systems are not being accomplished in sufficient volumes. Rice-growing farms are not fully being supplied mineral fertilizers and highly-effective herbicides, nor other chemicals to protect the seedlings against weeds, pests, and disease.

Scientific research on creation and introduction of new, fast-growing, short-stalk varieties, as well as on other vital questions in rice-growing development, are lagging significantly behind agricultural production demands.

Party and Soviet organs in the rice-growing oblasts and rayons are not using sufficiently capabilities for increasing rice-growing efficiency and are not accomplishing the requisite control over guaranteeing timely inauguration of new and reconstruction of extant irrigation systems, construction production sites, housing, and cultural and domestic amenities on rice-growing farms.

In this connection, the Central Committee of the Kazakhstan Communist Party and the Kazakh SSR Council of Ministers adopted a decree on measures for further development of rice growing.

Corresponding ministries and departments, the Alma-Ata, Kzyl-Orda, Taldy-Kurgan, and Chimkent party obkoms and oblispolkoms, and the party raykoms and rayispolkoms in rice-planting regions must take additional measures to [illegible] rice-growing specialization, to further increase productivity, to improve the quality of the rice, and to increase production. It is necessary primarily to achieve the increase in productivity and quality of the rice through improvements in the technology of its cultivation, introduction of new varieties, and effective use of irrigated lands, equipment, water, and fertilizers. Introduction of new operational rice irrigation systems on an area of 25,000 hectares, reconstruction of extant systems, and increasing their supply of water to 35,000 hectares must be accomplished between 1981-1985.

The Kzylordarismash [Kzyl-Orda Rice Machinery] plant has been tasked in 1983 to have an operational capability to produce 2,000 self-propelled windrowers of high off-road capacity and tractor-mounted harvesters per year and, by 1985, the capability to produce 2,000 pickup-stack formers and 3,000 PRT-3 pickups per year.

The Kazakh SSR Ministry of Agriculture, Glavrissovkhozstroy [Main Administration of Rice Sovkhoz Construction], and oblispolkoms must envision in the yearly plans, beginning in 1980, allocation for rice-planting areas of mineral fertilizers at a level of at least 20 quintals of standard mineral fertilizer per hectare; they must ensure, by 1982, construction on the large rice-growing sovkhozes of standard rice irrigation systems with an area of 5,000-6,000 hectares and must take measures for more complete supply of the requisite irrigation and agricultural equipment to these sovkhozes.

The Kazakh SSR Ministry of Procurement and of Agriculture, Glavrissovkhozstroy, and oblispolkoms must accomplish conversion to receiving the grain rice directly from the combines by equipping grain-reception enterprises with warehouse space and the requisite equipment to clean and dry the grain.

Beginning with the 1980 harvest, they must establish within a defined scope the counter sale of combined feeds to the republic's rice-planting farms.

The Alma-Ata, Kzyl-Orda, Taldy-Kurgan, and Chimkent party obkoms and oblispolkoms, local agricultural organs, and the party, trade union, and Komsomol organizations on the kolkozes and sovkhozes in rice-planting areas have been tasked to strengthen organizational work for broad development of socialist competition for maximum productivity improvement among workers on kolkozes, sovkhozes, and in procurement enterprises.

The editorial boards of republic, oblast, and rayon newspapers and the Kazakh SSR State Committee for Television and Radio Broadcasting must widely disseminate the progress of socialist competition for increased productivity, of improvement in total yields and sales of rice to the state, and the work know-how of the best rice-planting farms and the production leaders and innovators.

The Kazakhstan Communist Party Central Committee and the Kazakh SSR Council of Ministers expressed the firm conviction that party, Soviet, agricultural, and water management organs, kolkoz and sovkhoz leaders and specialists and the republic's rice growers will exert all their efforts to accomplish the program for further development of rice growing and will achieve the significant improvement in efficient use of every hectare of irrigated land.

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TILLING AND CROPPING TECHNOLOGY

RICE CROP IN KZYL-ORDINSKAYA OBLAST

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 17 Jun 80 p 2

[Unattributed article]

[Excerpts] One of the country's largest rice-planting zones has been created in the lower reaches of the Syr-Dar'ya River. The land area that has undergone engineering preparations here has reached 150,000 hectares. Average annual rice production has grown to 313,500 tons.

Striking changes are especially characteristic of rice planting--the basic sector of our economy. It underwent stormy development following the March (1965) and May (1966) CPSU Central Committee Plenums. In essence, one of the country's largest rice-planting zones was created during these very years in the lower reaches of the Syr-Dar'ya River. Suffice it to say, the volume of sales of this valuable groat crop rose from 57,600 tons in 1965 to 313,500 tons last year. The land area that underwent engineering preparations exceeded 150,000 hectares. Now more than 70 percent of the rice is planted here. In just 10 years, from 1966 through 1977, some 1 billion, 185.2 million rubles were invested in the sector to implement the decisions of the March (1965) and May (1966) CPSU Central Committee Plenums and the directives of the 24th CPSU Congress on development of rice planting in the lower reaches of the Syr-Dar'ya.

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TILLING AND CROPPING TECHNOLOGY

'PRAVDA' URGES INCREASED TRAINING OF AGRICULTURAL CHEMISTS

[Editorial Report] LD241339 Moscow PRAVDA in Russian 18 July 1980 publishes on page 2 a 1,800-word article by V. Nikonov, chairman of the "Sovyuzselkhozkhimiya" Association and USSR Deputy Minister of Agriculture, under the heading "Increasing Fertility: The First Steps of the Country's Unified Agrochemical Service." Nikonov describes the work of the agricultural chemicals service, which now has 3,000 rayon and 132 oblast associations, as well as a "Production and Scientific Association" in each union republic, centered on the "All-Union 'Soyuzselkhozkhimiya' Association."

He outlines the early work of the unified service in improving soil fertility and in the production and supply of fertilizers, noting the need in future to develop the production of liquid fertilizers and provide storage facilities for them. The article states in conclusion:

"The agrochemical service--in its unified complex--is taking its first steps. The scale of its tasks is complex. But these tasks have acquired priority significance in the resolution of the food problem. Here much depends on the cadres who have entered and will enter various subunits of the agricultural chemical service. The 'Soyuzselkhozkhimiya' Association has elaborated a program for training specialists and improving their qualifications. But we cannot overcome this problem without higher and secondary specialized educational institutes.

"The country's agriculture now uses more than 70 types of fertilizers and chemical improvement agents, more than 130 types of pesticide have been recommended for use and methods of biological plant protection are developing rapidly. All this must be utilized correctly and comprehensively not only for the harvest, but also in the struggle for the purity of the environment, and this is within the powers only of qualified specialists. At the same time only 7 percent of kolkhozes and sovkhozes have agricultural chemists, and only 5 percent have entomologists. I think higher education has incorrectly reduced the output of agricultural chemists. The training of specialists in technical schools has been virtually stopped. In our view the situation should be changed radically. Each republic must in the next 5 years supply its farms with cadres of agricultural chemists and entomologists possessing higher and secondary qualifications, since on this will depend the effectiveness of means of increasing soil fertility and protecting plants, and ultimately the level of yield of agricultural crops."

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TILLING AND CROPPING TECHNOLOGY

DEVELOPMENT OF KAZAKHSTAN IRRIGATION PROGRAM DETAILED

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 27 May 80 p 2

[Article by V. Goncharov, chief of Glavrissovkhozstroy][Main Administration for Rice Sovkhoz Construction]: "How the Irrigated Hectare is Working"]

[Text] The articles "Kak rabotayet polivnoy gektar" ["How the Irrigated Hectare is Working"] and "Kompleksno osvaivat' novyye zemli" ["Master the New Lands in an Integrated Manner"] published in KAZAKHSTANSKAYA PRAVDA on 6 December 1979 and 7 May 1980 were discussed by the Glavrissovkhozstroy [Main Administration of Rice Sovkhoz Construction] collegium. Serious shortcomings in construction and in assimilation of new irrigated lands in the Irtysh-Karaganda Canal zone, which the newspaper reported, do actually exist and the criticism directed to the main administration was fully justified. The 22 September 1975 Kazakhstan Communist Party and Kazakh SSR Council of Ministers decree "On Acceleration of Agricultural Assimilation of the Land in the Irtysh-Karaganda Canal Zone and More Efficient Use of Its Design Capacity" tasked Glavrissovkhozstroy to bring on line 28,200 hectares of irrigated land in the canal zone in 1976--1980. Some 17,500 hectares of this land will be assimilated; the task is underfulfilled by 10,700 hectares.

Six vegetable and dairy farms have been created in accordance with the plan to develop irrigation in the Irtysh-Karaganda Canal zone: Kazakhstan, Mirnyy, and Zvezda sovkhozes in Karagandinskaya Oblast and Prigorodnyy, Sovkhoz imeni Gagarin, and Ovoshche-molochnyy sovkhozes in Pavlodarskaya Oblast. With the exception of Ovoshche-molochnyy and Zvezda sovkhozes, the projected areas of irrigated land have already been assimilated on these farms. Prigorodnyy Sovkhoz and Sovkhoz imeni Gagarin have been accepted for operation by a state commission and are being prepared for turnover to the Kazakh SSR Ministry of Agriculture [Minsel'khoz]. Kazakhstan Sovkhoz is anticipated to go into operation in 1981, Mirnyy and Ovoshche-molochnyy in 1982, and Zvezda Sovkhoz in 1983. Given 139.6 million rubles as the estimated cost for integrated construction of these 6 sovkhozes, 109.8 million rubles will be expended by the end of the 5-year plan.

There are several reasons for the lag in turnover of the new lands in the canal zone, the main ones being: Refinement of the water balance in the irrigation development project, diversion of logistical resources of the trusts to construction of irrigation systems outside the zone to create irrigated feed sections, insufficient production capacity of construction organizations, and others. With the aquicultural balance of the Irtysh-Karaganda Canal established in 1974, 348 million cubic meters of water were allocated for regular irrigation, including 160 million for Pavlodarskaya Oblast and 187.8 million for Karagandinskaya Oblast down to the Samarkand Water Reservoir and below it in the Nura Valley. Also developed in 1974 was the "Project for Development of Irrigation in the Irtysh-Karaganda Canal Zone." Overall, it called for irrigation of 49,000 hectares of land (31,000 in Pavlodarskaya Oblast and 18,000 in Karagandinskaya Oblast). According to another project developed by Tsentrkazgiprovodkhoz [Central Kazakhstan State Planning, Surveying, and Scientific Research Institute of Water Management Construction], a proposal is made to irrigate 30,000 hectares in the Nura River Valley. But, a serious error was made here in computing the ordinates of the hydrological model.

USSR Minvodkhoz [Ministry of Land Reclamation and Water Resources] tasked Tsentrkazgiprovodkhoz to rework the irrigation development plan for the canal zone, then tasked a department in Gidroproyekt [All-Union Planning, Surveying, and Scientific Research Institute imeni S. Ya. Zhuk]. Work to refine the water balance and the irrigation development plan is not expected to be completed until the end of this year. Because of this, further projections and construction of new land reclamation installations were halted. For this reason, finished technical projects for construction of the second section of Sovkhoz imeni Gagarin with an irrigated area of 2,350 hectares and of Sovkhoz No. 3 with an area of 4,750 hectares in Pavlodarskaya Oblast and of Sovkhoz No. 1 with an irrigated area of 3,100 hectares in Tel'manskiy Rayon in Karagandinskaya Oblast, as well as a number of other projects for farms within the Kazakh SSR Ministry of Agriculture in the canal zone and in the Nura River Valley, are not being examined and are not being approved.

Another important reason that construction is falling behind is the lack of our own production base within the main administration in Pavlodarskaya and Karagandinskyaya oblasts. In accordance with previously-approved designs, asbestos cement pipes and "Sintab" low-grade reinforced concrete stand pipes are used in construction of a closed irrigation network. A network is also built of reinforced concrete troughs. Such irrigation systems under the conditions found in Pavlodarskaya and Karagandinskaya oblasts did not work out, as practice has shown.

Taking into account that, in the main, only systems with sprayers, which require a large number of scarce high-pressure pipes, are designed and built in the canal zone, we urgently set up their production at main administration enterprises, including those located in southern oblasts. In 1977-1979, we assimilated production of high-pressure reinforced concrete pipe with a steel core 500, 800, 1,000, and 1,400 millimeters in diameter and thin steel pipes 250 millimeters in diameter for transfer networks. Concurrently, the capability was created to equip more modern engineering systems with a closed irrigation network and with automated pumping stations using highly-productive sprinkling equipment. The Karagandaya ZhBI [Reinforced Concrete Products] Plant was rebuilt and the Pavlodar Reinforced Concrete Stand Pipe Plant is under construction. New construction and installation trusts and PMK [mobile mechanized columns] have been created.

In 1980, Glavrissovkhozstroy developed and is accomplishing a complex of measures to raise the productivity of agricultural crops and animal husbandry and to strengthen the economy of the sovkhozes. Since Glavrissovkhozstroy does not have services to control agriculture, measures are being taken to accelerate turnover of sovkhozes to continual operation within the Ministry of Agriculture. In this connection, work is presently underway to eliminate unfinished work, improve sovkhoz settlements, and repair buildings and structures.

In the article "How the Irrigated Hectare is Working," the newspaper correctly poses the question of improving irrigational capability of the Irtysh-Karaganda Canal by creating along its trace additional capacities for accumulation of water during the fall and winter. Design institutes propose creation of such a capacity in the Nura River Valley. A new reservoir--the Intumakskoye Water Reservoir--will be built below the Samarkand Water Reservoir and will have a useable capacity of 180 million cubic meters. This will permit a sharp increase in the canal's irrigational capability in Pavlodarskaya and Karagandinskaya oblasts.

Other design work on use of the Irtysh River's waters also continues. A model of the general plan in the engineering plan entitled "External Complex of Installations Supplying Water from the Irtysh-Karaganda Canal to Dzhezkazgan, Atasu, and Shetskiy Industrial Regions" envisions irrigation of 14,000 hectares of land in Dzhezkazganskaya Oblast from the canal and the Nura River with water intake from the regulatory Aktas Water Reservoir. Based on tasking approved by the USSR Minvodkhoz and Minsel'khoz, technical and economic substantiation for irrigation and assimilation of this large tract has been developed. This is under the supervision of and coordination by USSR Minvodkhoz and USSR Gosplan. Creation of four new vegetable and dairy sovkhozes is envisioned in this large tract.

The draft construction plan for the 11th Five-Year Plan calls for accomplishment of much work involving land reclamation construction and integrated assimilation of irrigated lands in the Irtysh-Karaganda Canal zone and of its second section. In 1981 in Pavlodarskaya Oblast construction will begin on a sovkhoz-plant for production of feeds and, in 1985, construction of Ovoshche-molochnyy Sovkhoz No. 2 in the large Kalkaman tract and the second section of Sovkhoz imeni Gagarin; construction will begin in Karagandinskaya Oblast on Ovoshche-molochnyy Sovkhoz No. 1 and on two new farms in Dzhezkazganskaya Oblast. Construction is to begin in 1984 on the Intumakskoye Water Reservoir.

Work on development of a production base also continues. In particular, the intention is to build a second ZhBI plant in Pavlodar, development of the design for the final section of which is coming to an end.

Along with integrated construction sites, land irrigation on a wide scale is being accomplished for the Ministry of Agriculture in accordance with a refined plan for irrigation development in the canal zone.

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TILLING AND CROPPING TECHNOLOGY

POTATO CROP IN NON-CHERNOZEM ZONE, WET COMPACT SOIL

Moscow SEL'SKAYA ZHIZN' in Russian 12 Jun 80 p 2

[Article by A. Zamotayev, director of the Scientific Research Institute of Potato Farming: "Consider Definite Conditions?]

[Text] Excessive precipitation and a long period of cold weather have created considerable difficulty this year for potato farmers in a number of oblasts of the Non-Chernozem Zone. Nevertheless, in fields with light soils, where the tubers were planted at the end of April and in the first 10 days of May, the sprouts are coming up normally. In heavier soils, especially medium and heavy clay-loams, emergence of the sprouts is retarded due to the fact that the tight, supersaturated surface layer obstructs their penetration. At the same time, tubers receiving cuts or serious mechanical injuries which were not treated with chemical preparations may even start to rot. The most advanced farms are therefore doing everything they can in the way of careful management to soften the effects of the adverse weather conditions on the growth of potatoes.

Experienced potato growers made plans to cultivate no fewer than two to three times prior to emergence of sprouts. These operations are especially effective when weeds are in the "white filament" stage, that is, just before their emergence. At this time, it is possible to destroy up to 80 percent of emerging weeds with harrow cultivation. Subsequent cultivation is carried out after 7-10 days: on light, sandy-loam soils, it is shallow--8-12 centimeters, while on wet soils inclined to compactness, 14-16 centimeters is usual. On light soils, it is best to use duckfoot sweeps in combination with furrower sweeps. Sweeps employing two-sided, single-point duckfoot tines are installed on the outside gangs of the cultivator, while both single-point duckfoot and double-point chisel tines are the rule on the central gangs. Pointed tines give the best effect on heavy soils.

For weed control, surface cultivation, and breaking up of surface crust, cultivators employ attached reticulated chain harrows. Through the use of a flexible linkage, they may be set for the proper angle with respect to the cultivator's forward movement. Many farms are using the BRU-0,7 universal rotary hoe for intensive cultivation, and in lieu of that device, the KRN-3,8 [tool-bar weeder and cultivator].

In Moscow Oblast, the ZBP-0,6 spike-tooth harrow is widely used for pre-emergence cultivation. In order to attach them to cultivators, the operators make a simple adjustment: they bend the tines length wise, giving them a saddle shape. These harrows seem to "hug" the soil layers and thus break up not only the surface, but the subsurface as well. If the soil is heavy, potato farmers add weights to these harrows.

The current year has seen excellent conditions established for the growth of weeds. Mechanical cultivation may therefore be inadequate for their control. Where this is the case, farmers are employing herbicides. Most effective for use against dicotyledonous weeds are dikotex (1-1.5 kilograms of active ingredient per hectare) and prometrin (1.5-2 kg) applied two to three days prior to the emergence of potato sprouts and after pre-emergence mechanical cultivation. Herbicides are most effectively applied on windless days at a temperature of 20-25°C. using tractor-drawn crop sprayers of the boom type and distributing from 200 to 600 litres of liquid preparation.

In order to reduce the number of passes the equipment must make, potato growers combine such operations as the spraying of pesticides with normal crop cultivation utilizing the KON-2,8 PM or the KRN-4,2, being careful to ensure a uniform covering of the surface of the field with the liquid preparation.

Currently, it is not possible to dispense with feeding crops with fertilizers in as much as a part of the plant nutrients has been leached from the soil by rainfall. For this reason, equipment operators attach fertilizer spreaders to KON-2,8, PM and KRN-4,2 cultivator/hillers and apply nitrogen fertilizers (at 30-60 kg of active ingredient per hectare) simultaneously with cultivation. A POU [mobile spraying device] apparatus is used to apply ammonia water in conjunction with cultivating operations.

As soon as plants reach a height of 15-20 centimeters, hilling operations are begun. The greater the rainfall on clay-loam soils, the higher the hills should be.

For inter-row cultivation and light hilling of potatoes, cultivator/hillers can be fashioned on any farm from standard duckfoot sweeps with a cutting width of 220 milimeters. A double tailpiece (60 milimeters wide) is welded to each unit and strengthened with a cross-brace. During cultivation, the forward tines leave the greater part of the turned soil in the inter-row, from where the trailing tail pieces move it to the sides, forming neat, well-loosened hills. The UZR universal cultivators are advantageous for intensive cultivation; their tines can be adjusted in a stepwise fashion in relation to the contour of the plow sole.

In order to prevent the plants from being buried in soil, some farms install a soil deflector rod on the standard of the frame and by means of this device direct the soil under the potato foliage.

In those places where the surface of the potato fields is covered with lumps or clods of soil, the FPU-4,2 rotary cultivator with hilling attachment is found to be indispensable. The attachment consists of disk hillers, which are mounted on the [illegible] with the aid of additional hangers over each gang.

Last year, the highly dangerous plant disease, phytophthorosis, was widely distributed in many regions of the Non-Chernozem Zone. Infected tubers turned up in seed potatoes, which could lead to an outbreak of the disease in this year's crop. For this reason, many farms are stockpiling copper-containing preparations well in advance. A 0.1-0.2 percent solution of copper sulfate would be used for initial treatments. The concentration is increased to 0.2-0.3 percent as needed. The application rate is 500 litres of liquid preparation per planted hectare. At the appearance of the first signs of the disease, applications are made of copper oxychloride (2.4-3.2 kg per hectare) and kuprozan (2.4 kg/ha). Phytophthora develop primarily on the underside of leaves, and sidemounted dusters are for this reason installed on cultivators. Excellent results in the treatment of potato fields can be obtained with the use of helicopters.

In regions infested with the Colorado potato beetle, dusting against phytophthora is combined with measures against the beetle wherever the pests' treatment schedules coincide. The following mixtures are employed: for initial treatment--polychlorpinene with zineb (both preparations applied at the rate of 2 kg/hectare); for secondary treatment--chlorophos (1.5 kg) with zineb (2 kg), or with copper oxychloride (2-2.5 kg).

Leading potato growers, having taken stock of the difficult weather conditions, made plans to carry out foliar feeding of their crops during the period of tuber formation (three to four weeks prior to harvesting) using solutions applied at the following per-hectare rates: ammonium nitrate-2kg; potassium chloride-2 kg; superphosphate-20 kg; copper sulfate-100 grams. This combination of fertilizers will speed the flow of nutrients from the leaves to the tubers, which will consequently reach maturity sooner.

Under the conditions prevailing this year, a beneficial effect will be provided the potato crop by cenication conducted 10-12 days prior to harvesting by spraying the plants with a 20 percent solution of double superphosphate supplemented with 0.01 percent preparations of 2.4-D (sodium or amine salts, or butyl ester). Application rate of the liquid is 50-180 litres per hectare. Cenication may be combined with actions against disease organisms by introducing the appropriate toxic chemicals into solution.

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CSO: 1824

TILLING AND CROPPING TECHNOLOGY

POTATO VARIETY DEVELOPMENT IN ESTONIA

Moscow SEL'SKAYA ZHIZN' in Russian 20 Jun 80 p 2

/Article by S. Kuznetsov, correspondent for SEL'SKAYA ZHIZN' in Estonia: "Single-Variety Troubles"/

/Text/ Last summer in Estonia has been unanimously recognized as especially favorable for the growth of potatoes. And the yield at harvest of the tubers was good--162 quintals per hectare. This is considerably higher than the figure for rainy 1978. But, it is 23 quintals less than, let us say, 1970, and 30 quintals less than 1968! Year by year comparisons do not have much validity in agriculture. However, the overall tendency toward stagnation--and even gradual decline--of harvest yields is evident.

What is the cause of this process?

The chief agronomist of the ESSR Ministry of Agriculture, Toomas Yaanvyark, showed me two highly interesting charts: distinctly visible on one of them was a reduction in the quantity of potato varieties being grown(in 1957, there were 17 in use, last year--2); on the other chart, a gradual decline in per-hectare yields of tubers was noticeable. The relationship between the two charts was apparent, as they say, to the naked eye.

But, it all began as a certain success. In 1962, the potato variety, "sulev," developed by local plant breeders, was regionalized in the republic. It was high-yielding and undemanding, and it stood up satisfactorily to combine harvesting and storage in piles. The triumphant march of "sulev" across the potato fields of Estonia and several other republics began posthaste. It began to crowd out the nationally popular "lorkh," and generally all varieties in Estonia, and soon had seized 78 percent of the area planted to potatoes in the republic, leaving only minor parcels for the late-maturing "olev."

Many potato growers clearly understand the danger inherent in the use of a single cultivar for the sector. The senior research associate of the Ygevaskaya breeding station, candidate of agricultural sciences, Alisa Ottovna Anderfel'd has frankly stated:

--The excessive enthusiasm for "sulev" is inflicting serious harm on the situation.

When she said this, A. Anderfel'd was primarily concerned with the qualitative aspects of "sulev"--its sensory, culinary, and marketability characteristics. Indeed, last year, a group studying potato production for the Estonian Agricultural Academy, while carrying out a highly exhaustive and painstaking evaluation of all the multifarious potato varieties ever grown in the republic, placed "sulev" in last place on all counts. The other variety still in use in Estonia, "olev," surpassed "sulev" only with regard to the indicator measuring "losses during cleaning"... Nevertheless, there is nowhere to be found in Estonia these days a good eating-quality potato of such earlier well-known varieties as "yygeva kollanye," "shtiglits," "adretta," "ando"... All of them have been driven out of the fields by "sulev."

But, the monopoly of "sulev" has led not only to the disappearance of valuable varieties of food potatoes. It has also caused a decline in per-hectare yields in the republic. Yes, initially the "new" variety displayed excellent resistance to fungal and viral infections. In the early years, phytophthora could not gain a foothold in its fields. But then, phytophthora infection struck plantings of the "older" variety--"olev." And it next turned out that they--"olev" and "sulev"--were relatives and were subject to infection by the same strain of phytophthora: when "olev" had the disease, "sulev" became infected and vice-versa.

During the time when the fields were planted with potato varieties which were subject to infection by different strains of phytophthora, the disease not only was not transmitted further, but even died out--researchers have established that different strains of phytophthora act to suppress each other. But, now, for phytophthora strain-1, there is an unlimited field of opportunity. And, how it is flourishing! As early as August of last year, for example, it had destroyed the tops of almost all potato plants in the republic. Growth of the tubers came to a halt. According to the estimates of researchers and specialists, this reduced harvest yields by at least 35-40 quintals per hectare. These losses were directly inflicted by the use of a single crop variety!

There are several means of controlling rot diseases of potato tops. One of them is the selection of varieties which were immune to the strains of phytophthora most widely distributed in the area of concern. And those varieties are--"eba," "adretta," and "belaya noch'," which last year in variety-testing plots yielded an unprecedented harvest--669 quintals per hectare, and also "navka," and "nevskiy," the yields of which exceed 500 quintals per hectare on experiment farms...

Scientific research institutions of the republic have long recommended that every farm grow three to four varieties having different biological qualities and requirements. But, there is a difference between the scientists' recommendations and the established practices of the scientific research organizations. Consider the Estonian NII for Farming and Land Improvement, whose experiment farms are responsible for supplying the republic with superior seed stock. The superior seed plan, calling for 3,300 tons per year, is precisely carried out. But, with which varieties? Last year, for example, experiment farms of the institute furnished the republic with 2,400 tons, all of which was "sulev" seed, 1,100 tons of the familiar "olev," and ...only 300 tons of potatoes of early-maturing varieties.

The head of the seed production sector at the Estonian NII for Farming and Land Improvement, Yaan Madisovich Reyeman, explains the attitude of the institute's experiment farms with regard to "sulev" quite simply:

--They don't order superior seed of other varieties from us. Everyone asks for "sulev."

First of all, it isn't everyone! I recall a conversation with an agronomist at the Khar'yuskiy Rayon kolkhoz, "Loks," A. Reynpere, in which he bluntly declared: "If there is a good variety available, we will take it. In fact, "sulev" has not been setting any records for us either. One hundred sixty quintals per hectare--that's its upper limit."

And, A. Reynpere is not the only one thinking this way. Many workers in the field have already realized that it is impossible to successfully develop potato production using a single variety. They are waiting for the experiment farms to provide seed stock of new, high-yielding varieties resistant to diseases endemic in the republic. But, they have not appeared in the seed reserve, while "sulev" has let down those who thought that it would put them among the agricultural front-runners for many years to come.

And, yet another aspect of potato seed production is going awry which many years ago seemed unlikely to become a cause for alarm. I refer to the production of superior planting stock. On paper, all the calculations appear to be right on the mark. Experiment farms of the NII for Farming and Land Improvement annually provide 3.5-4,000 tons of superior seed potatoes--10 tons per each 100 hectares of production plantings. This means that the fifth reproduction should be the last. But, it does not work out this way in practice! Take the data from Khar'yuskiy Rayon: for 1980, seed from the first through the fifth reproduction amounted to only 35 percent, while seed from the fifth through the seventh reproduction totaled 20 percent. The same situation exists in other rayons in Estonia as well.

The explanation for this seemingly mysterious phenomenon turned out to be very simple. Seed potatoes will not be selected in spring from the field in which first reproduction potatoes were planted, but from the pile which has the best-preserved tubers. A carefully worked out high-quality seed production plan not infrequently comes to naught, while tubers of mass reproduction are used for seed. Outstanding seed stock is disappearing because of the poor organization of winter storage. There is not a single [illegible] average capacity in the republic.) The recently constructed storehouses on the kolkhozes, "Estonia," "Edasi," and "Viru" of Paydeskiy, Pyarnuskiy, and Rakvereskiy rayons respectively, although a definite step in the right direction, do not have temperature regulators, do have reduced mechanization levels, and do have ill-conceived security equipment. In many rayons of the republic, the average capacity of potato storage facilities amounts to only 250 tons. Hundreds of thousands of tons are stored in piles. The aggregate of these piles, as computed in the ESSR Ministry of Agriculture, approximates a figure of 50,000... How much land do they occupy--how much straw is required for their construction! How much, finally, of the potato crop is lost by this method of storage! And, this loss includes potatoes of all types--those used for livestock feed, human consumption, and, of course, seed.

Moreover, builders of potato-harvesting combines should not be allowed to forget that farmers expect them to provide machinery, not designed for handling billiard balls, but delicate, living organisms... Maybe then, the tough-skinned "sulev," having occupied Estonian fields undeservedly, will lose its "popularity" advantage and quickly yield its position to new varieties with all of the nutrients and qualities that we need.

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POTATO CROP PROBLEMS IN TURGAYSKAYA OBLAST

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 15 May 80 p 2

/Article by V. Levitskiy, KAZAKHSTANSKAYA PRAVDA special correspondent in Turgayskaya Oblast': "More Concern Over the Potato Crop"/

/Text/ The roads on which Turgayskaya Oblast purchasing agents set out each day in search of potatoes lead to the Bashkirskaya ASSR, Krasnoyarskiy Kray, Kuybyshevskaya and Sverdlovskaya oblasts...

The amount of imported potatoes varies in proportion to the size of the harvests obtained on specialized potato farms in the oblast'. In order to supply the needs of Turgay residents for potatoes and constantly maintain the necessary stock of seed potatoes, the annual net yield of this crop must be raised to 24-25,000 tons, that is, harvest yields must be increased almost twofold. The experience of the leading potato-growing farms demonstrates that this objective can be successfully accomplished.

The sovkhoz, Derzhavinskiy, has been specializing in the production of potatoes, vegetables, and milk for six years, and is achieving high indicators. In 1979, it realized 168 quintals of tubers per hectare, whereas its quota under the plan was 120. Supplies of potatoes to the state increased significantly--from 691 tons in 1976 to 1252 tons last year. Now, "Derzhavinskiy" plans to increase harvest yields to at least 170 quintals per hectare.

The growth of potato production here is based on a high level of agrotechnology, advanced methods of labor organization, and the application of the latest scientific advances.

Recognizing that one of the most important factors underlying an increase in harvesting yields is the application of the proper amounts of organic and mineral fertilizers, the farm's potato growers apply from 100 to 120 tons of organics per hectare, alternating with mineral fertilizers.

The majority of production processes in the sovkhoz's potato production are mechanized.

Since [illegible], the sovkhoz has fully supplied its own needs for variety seed. A 600-ton, model storage facility using active ventilation guarantees that there will be no decline in seed quality.

The production successes of the sovkhoz workers are directly related to the resolution of social concerns. The first four years of the five-year plan saw the construction here of 40 well-built residential units, a model grade school for 480 pupils, and a shopping center.

The unstinting concern for human needs has practically eliminated the problem of personnel turnover. For example, the staff of a truck farming brigade comprised of 60 persons remained virtually unchanged over the duration of a lengthy period. From the moment of its creation, the brigade has been under the direction of the highly experienced specialist, Nikolay Vasil'yevich Grudina.

Outstanding results in potato cultivation are also being achieved by the workers of the sovkhoz, Pobeda. In 1979, the farm's potato growers obtained 130.5 quintals from 376 hectares of irrigated fields, in contrast to the projected yield at harvest of 96.7 quintals. Average yield at harvest for the four-year period was 111.7 quintals per hectare.

Pobeda has achieved a high level of mechanization. The loading and unloading of potatoes in the storehouse, the loading of potato planters and motor transports, the cutting of the tubers, the curing of seed potatoes----all of these processes have been mechanized. As is the case with Derzhavinskiy, the production cost of potatoes is lower than the planning estimate. Both of these farms have become schools for the teaching of advanced methods. Last year, an oblast -wide seminar on the technology of potato storage was held at Pobeda, while a similar seminar on regulations for shipping and receiving market garden products was conducted at Derzhavinskiy.

However, no matter how high the indicators are for individual farms, they cannot solve the problems of fully supplying the population of the oblast with potatoes and establishing the necessary reserve of seed potatoes. Planned harvest yield for the oblast as a whole is not high--76 quintals per hectare, but for a number of farms engaged in commercial potato production, even this mark remains out of reach for the time being--not rarely, 40-50 quintals per hectare is the upper limit. Indeed, some sovkhozes, such as, Amantogayskiy, Saryuzenskiy, Entusiast, and Molodezhniy, last year recorded an average yield of 20-30 quintals of potatoes per ha.

The primary factor among those restricting harvesting yields is the shortage of quality seed potatoes. Sovkhozes yearly supply a good deal of seed potatoes which for the most part are of low-grade and poor quality. The result is poor harvests. Difficulties are arising with seed potato supplies this year as well. At planting time this spring, only 70 percent of the necessary amount of seed potatoes was available.

in the potato production sector, gross violations of agrotechnical principles are allowed to take place, the most serious of which is the failure to observe the proper periods for planting which is frequently completed in the final days of May, when the soil is already quite dry. Indeed, the experience of those farms completing potato planting by 10-12 May confirms that it is possible to obtain comparatively high yields, even on non-irrigated lands. A number of farms are running late with inter-cropping operations and are not maintaining proper irrigation periods and standards, which leads inevitably to a reduction in potato yields.

An undesireable effect on potato production results from a shortage of some types of equipment--overhead irrigation installations of the type, DDA-100, potato planters, potato diggers, cultivators, MTZ-80 tractors, and potato loaders. Nonetheless, orders by the oblast for certain types of equipment go unfilled from one year to the next. Meanwhile, without the necessary pool of equipment, it is difficult for potato-growing farms to effectively develop the sector. The supply of mineral fertilizers is very poorly effectuated as well.

Despite the difficulty with seed potato supply, plans are underway in the oblast' for qualitative improvements in the development of seed potato production. This area is undergoing constant improvement on the sovkhoz, Pobeda, which last year alone sold to oblast farms almost 1000 tons of high-grade seed potatoes.

The successfull development of the sector is inconceivable without adequate numbers of potato storage facilities, the construction of which is now receiving a great deal of attention. Last year, model storage facilities of three thousand ton capacity and equipped with active ventilation systems were installed on the sovkhozes, Zheleznodorozhniy, and Kalinskiy, and on the Turgayskaya oblast agricultural experiment station. Storage capacity for the oblast as a whole totals 14,000 tons, while demand is at 18,000 tons. With the introduction this year of potato storehouses on the sovkhozes, "Amantogayskiy," and "Kalachevskiy," the problem of the storage of food and seed potatoes is diminished. But this by no means exhausts the range of unresolved questions. Only a full implementation of all planned measures for improving the sector and an increase in the accountability of directors and specialists for the state of affairs on potato-growing farms will make it possible to overcome the lag in potato production and fully satisfy the public need in that area.

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CSO: 1824

BRIEF

POTATO CULTIVATION RESEARCH--Bryansk--A progressive hilling technique used in the growing of potatoes has helped the farms of Bryanskaya Oblast' to buy time during the current unsettled spring weather and to plant their crops at more agrotechnically advantageous times. Recommedations for the use of the new technique were worked out by staff members of the local branch of the Scientific Research Institute for Potato Farming. This research foundation, which is concerned with the Russian Non-Chernozem Zone, began its operations on the nearby sovkhoz, Bryanskiy. Potatoes are the leading crop in the oblast . Nearly 120,000 hectares--the largest such area in the Russian Federation--are allocated to potato cultivation here. Production is shifting to an industrial basis, and specialization and crop intensification in potato production are achieving realization. The new research branch on the sovkhoz is aiding in the successful accomplishment of these objectives. It is specifically tasked with selecting and propagating high-yield potato hybrids for the areas which are involved with intensive cultivation of this crop--Bryanskaya, Orlovskaya, Kaluzhskaya, and Smolyenskaya oblast's. In addition, it has responsibility for the introduction of progressive technology in the area of industrialized potato production. /Text/ /Moscow GUDOK in Russian 6 Jun 80 p 1/ 9481

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